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Raising Tax Revenue in Low Income Countries

What are the Most Effective Measures? The Case of Ethiopia and Georgia

Ehite, Kifle

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RAISING TAX REVENUES IN LOW INCOME COUNTRIES: WHAT ARE THE MOST EFFECTIVE MEASURES? THE CASE OF ETHIOPIA AND GEORGIA

THESIS PRESENTED BY:

EHITE HAILEKRISTOS KIFLE

ADVISOR:

PROFESSOR MARY VAN OVERBEKE (ADE)

TUTOR:

STEPHANIE WEYINANTS (PHD) (UNAMUR)

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Département des Sciences économiques/UNamur • Rempart de la Vierge 8 • 5000 Namur Ecole d'économie de Louvain/UCL • Place Montesquieu 3 • 1348 Louvain-la-Neuve

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List of Abbreviations

BIT	Business Income Tax
CIT Prod	Corporate Income Tax Productivity
CIT	Corporate Income Tax
DRM	Domestic Resource Mobilization
EPRDF	Ethiopian People Representative Democratic Front
ETB	Ethiopian Birr
EU	European Union
GDP	Gross Domestic Product
IMF	International Monetary Fund
NBE	National Bank of Ethiopia
OECD	Organization for Economic Co-operation and Development
PIT Prod	Personal Income Tax Productivity
PIT	Personal Income Tax
RRA	Rwanda Revenue Authority
SDGs	Structural Development Goals
TIT	Tax on International Trade
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNESCO	United Nations Educational Scientific and Cultural Organization
UNU-WIDER	United Nations University World Institute for Development Economics Research
USAID	United States Agency for International Development
VAT	Value Added Tax
VATGCR	Value Added Tax Gross Compliance Ratio
WB	World Bank
WTO	World Trade Organization

Abstract

Tax is the primary source of government revenue in developing countries. However, because of weak tax administration, excessive corruption, and low tax payers compliance, the tax collection capacity is quite small. To improve tax revenues and its collection mechanisms, tax reform projects in the world, especially in developing and emerging countries are influenced by international institutions and advanced countries governments. The main objective of this study is to analyze the effectiveness of various tax reform measures on tax revenue and on income redistribution (income inequality) in Ethiopia and Georgia using a secondary time series data ranging from 1995-2019 and analyzed through descriptive method of data analysis. The result shows that in Georgia tax reform bring a significant rise in tax revenue while for Ethiopia the effect is negligible to boost tax revenue. For Ethiopia international trade tax per GDP has a better contribution while for Georgia the share of VAT and personal income tax followed by corporate income tax per GDP have great contribution on tax revenue. On the other hand, VAT, PIT, and CIT per GDP ratio for Georgia and foreign trade taxes per GDP for Ethiopia have a strong negative correlation with income inequality while VAT and BIT for Ethiopia and international trade taxes for Georgia have a negative correlation with income inequality but there correlation is weak. In Ethiopia the tax reform should be revised to boost tax revenue and to increase its share to GDP.

Key Words: *VAT, PIT, BIT, CIT, TIT, Tax Revenue, Income Inequality, Ethiopia, Georgia*

1. INTRODUCTION

1.1. The Importance of Taxation

This study relies on two case studies (Ethiopia and Georgia) to analyze the effectiveness of different tax reform measures on domestic tax revenue and income redistribution.

Domestic Resource Mobilization (DRM) is crucial for development and it is the way that countries want to raise and spend their own resources to provide for their society. The issue of DRM receives increasing attention from developed country governments and donors like IMF and World Bank. It increases the ability of governments to achieve long-term objectives by enhancing fiscal sustainability. Its main sources are tax and non-tax revenues which aim at the government to provide public goods and services; to invest in development; to bring sustainable economic growth and to reduce poverty (UNDP, 2016).

DRM mainly covers the mobilization of domestic resources with two main dimensions: fiscal policy and collection. The fiscal policy dimension of DRM consists of objectives of fiscal policy, nature of taxation; tax rate and objectives of taxation.

Fiscal policy has three main objectives: resource effect, income redistribution effect and allocative effect. The resource effect of fiscal policy concerns about raising the amount of public revenues. Tax revenue collection is one of fiscal policy component used to raise government revenues for economic development especially for developing countries. A better mobilization of domestic resources helps a country to reduce its budget deficit and to control its process in economic development and poverty reduction. There is a need of sustainable rise in economic growth for long period for reduction of poverty (UNCTAD, 2005).

Income redistribution is an economic practice which is targeted by the government for smoothing the distribution of income in a country through a direct or indirect transfer of income from the high income group to the low income individuals. To implement this phenomenon economists or governments take progressive taxation system as an economic policy or strategy instrument. Since progressive taxation allows the rich individuals to pay more, this instrument is designed to reduce income inequality or maintaining fair distribution of income in a society. If this strategy or policy is done with proper administration, it serves the overall benefit of society or national welfare and economic growth. It creates a large consumer market/class which has adequate money to spend on goods (OECD, 2012;2015).

Allocation efficiency appears when organizations in the public and private sectors spend their resources on projects that are most profitable; satisfy all individual wants; and promote economic growth. Or allocative efficiency of fiscal policy reflects the allocation of government expenditure on the provision of most useful public goods and services. Local and state governments are the primary candidates for the provision of those public goods on grounds of efficiency. These governments are more responsive and accountable for the people to whom the services are intended; they are responsible to eliminate unnecessary layers of authority and they enhance competition and innovations when local and regional authorities assume the provision of public goods (Tadesse, 2010).

Taxation is a method of collecting funds by a government from tax sources to finance its operation. In addition taxation can also be used by the government, through its law making body, to raise internal income for the use and support of the government and to enable it discharge its appropriate functions (Tsegaye, 2011). Moreover, taxation is the main sources of financing government expenditure. Especially developing countries use taxation to raise their revenue for their economic development and to reduce poverty and maintaining sustainable economic growth (UNCTAD, 2005).

Taxes are charged at different percentage rates based on income or consumption level of individuals. There are three principal rate schedules of taxation, namely, Proportional taxation, Progressive taxation and Regressive taxation. Proportional taxation refers to that system of taxation under which each tax payer pays the same rate of tax whatever is his/her income. It means that the ratio of tax liability to tax base remains the same whatever the tax base is. Progressive taxation represents the system of taxation under which the rate of taxation increases with increase in income, i.e., the higher the income, the higher should be the ratio of tax. On the other hand, a tax is said to be progressive when the ratio of tax liability to tax base increases along with increase in tax base. Regressive taxation is the reverse of progressive; the rate of taxation decreases with increase in income (i.e. more of the burden is on lower incomes groups).

Hence in regressive taxation system the ratio of tax liability to tax base decreases along with the increase in tax base (Jemal & Mesfin, 2007).

Governments impose taxes for three main purposes: to cover the cost of administration, maintaining law and order in the country and for defense. But through time government's expenditure pattern changed and gives service to the public more than these three basic purpose and it restore social justice in the society by providing social services such as public health, employment, pension, education, sanitation and other public services. So, to facilitate these public goods governments want more amounts of funds. In order to generate more revenue a government imposes taxes on various types (on income. consumption and production). In general the main objective of taxations are: raising domestic revenue (primary aim of taxation); reducing inequalities in income and wealth; maintaining economic stability*;* regulatory objectives; incentive objective; creating employment opportunities; maintaining growth, equity and stabilization; control of cyclical fluctuation; encouragement of exports and enhancement of standard of living (Jemal & Mesfin, 2007).

The second dimension of DRM is about collection: consisting of institutional capacities, tools of collecting domestic revenue and organization of the administration. According to (Kirabo, 2013) institutional capacity refers to the ability of implementing and improving domestic resource administration focusing on efficiency and effectiveness. Institutional capacities play an important role to handle various revenue sources. The main aim of institutional developments in developing economies is building tax systems capable of raising revenues from broad tax base but still now they are inadequate in number and placement. Well-developed institutions enjoy an enabling environment using available resources to generate revenue. To be effective and efficient in raising revenue there is a need of strengthening of institutional capacity by facilitating human resource, broadening the local revenue base and improvement on infrastructure to enhance total revenue. Countries with higher tax capacity tend to have stronger institutions while countries with very low tax capacity have weak institutions. So tax payers should be regularly involved through a bottom-top planning strategy by the central government (Akanbi, 2019)

The organizational administration of DRM focused on the structure of tax at federal and regional level tax administration. In Ethiopia large scale firms have a license at federal level and they are accountable for federal government while small scale firms' license is at state or regional level. The taxation powers of the federal government consists of: federal stamp duties, monopoly tax, value added tax, national lottery, fees from licenses issued and services provided by organs of the federal government. The federal parliament is responsible for levying taxes assigned to the federal government. On the other hand, the regional state power of taxation include: taxation of employment income from employees of the state government; tax on private traders; agricultural tax from farmers houses and other property owned by private persons or regional government; employment, and sales tax from public enterprises owned by the state government; royalties and land lease fees from small mining undertakings. The power of levying taxes at regional level is the state councils (Belay, 2014).

1.2. Taxation in Developing Countries

Tax is the main source of domestic revenue for most developing nations Ethiopia and Georgia are not exceptions. It is a compulsory payment for which individuals and cooperatives are required to pay certain proportion of their income to the government that helps to mobilize revenue to provide public goods and services; and for the expansion of growth and development through the redistribution effect of taxation on health, education and other infrastructures. (Mamo, 2017) ; (Geda, 2003).

But developing countries lag behind in domestic revenue mobilization from their taxes and force to look for external resource. They have faced difficulties in mobilizing resources for investment from their domestic sources. This is due to the fact that in developing countries expenditure programs are hindered by low tax revenues. In addition, these nations suffer from a difficult external environment and weak administrative capacity, hard to tax in the informal sector, weak tax administrations, poor governance, low taxpayer morale and compliance, corruption and a small tax base (Mamo, 2017) and (UNDP, 2016)). Therefore increasing domestic resource mobilization needs a priority for many developing countries through undertaking tax reforms.

Tax reform refers to the way of changing the existing tax system or the status quo to a new level of tax system with the main objective of generating sufficient tax revenues to finance sustainable increasing public expenditure. Tax reform system is a one mechanism that helps to increase domestic resource mobilization and increases the volume of tax revenue. This idea is an important issue of development strategies. The tax reform project is led by international institutions like IMF and the World Bank and dominated by tax experts and developed nations. And these tax reform systems are easily transferred into developing countries and then they implement them (Gashaw, 2015).

The role of taxation has been increased as a tool of raising domestic revenue and for accelerating economic growth and ensuring social justice. But similar to other developing countries, Ethiopia faces difficulty in raising tax revenue to the required level for the expansion of economic growth and development. The tax to GDP ratio remains low at 8.2% in 2010 and it shows even a declining trend and reaches only 6.7% in 2019 (NBE, 2020). To address these fiscal challenges or to generate adequate tax revenues to finance ever increasing public expenditure for poverty alleviation and development projects, the government of Ethiopia initiates tax reforms. The first major change in Ethiopia's tax system was started in the 1940s. But comprehensive tax reforms are started in 2002/03 as an integral part of economic reforms. One of the tax reforms that Ethiopia implements is Value Added Tax (VAT) introduced in January 2003 to replace the existing ineffective sales tax. It has specific characteristics which provides for taxes on services as well as goods, tax exemption for exports and permits for reduction in rates on basic goods. It is argued that VAT increases government revenue, improves economic efficiency and fosters growth (Geda & Shimeles, 2005)and ((Abdella & Clifford, 2010).

On the other hand, Georgia is one of the developing nations which is found in the joint of Western Asia and Eastern Europe where tax revenue especially income tax is the main source of government revenue. Before 2003 taxation is a major problem for Georgia. Tax collection is difficult due to the lack of a well-functioning administration agency, low performance of tax payers' compliance, and corruption; in 2003 tax to GDP ratio is only 7.1% (WB, 2020). But after 2003 of its rose revolution the new government of Georgia designs an aggressive agenda of legal, regulatory, and institutional reforms designed to eradicate public sector corruption, raise domestic revenue through raising tax collection and create an attractive environment for business investment and the government committed itself to deeply reforming the tax system, to reduce both of tax and administrative abuse. At the end of 2004 a number of taxes and their rates are reduced to the lowest levels in the region. VAT rate is reduced from 20% to 18% and personal income tax rates are combined with the social contribution (payroll tax) into a single tax of 20%

on income. Taxes on corporate dividends and interest earnings are reduced from 10% to 5% in 2008 (Filer, 2012) ; (Karine & Randall, 2012); and (OECD, 2015).

Even though the economy of Ethiopia and Georgia have been growing at a remarkable rate especially Ethiopia averaging more than 10%, the slow growth in the tax to GDP ratio suggests the growth in tax collection is not adequate with the economic growth perhaps indicating a huge untaxed potential. Thus, the main intention of this project is to identify what type of tax reform measures are undertaken to raise tax revenue and to analyze their effect on income redistribution in the two case studies. The reasons why I want to devote on these two countries are 1). Both nations are developing countries 2). Both of them made tax reforms in almost the same year (since 2003); and 3). Since Georgia is successful in tax reform measures as I observe from past empirical literatures so here one of my interests to study on such two countries is to see what lessons Ethiopia learn from Georgia.

There are several studies like (OECD, 2015), a cross country analysis (including Georgia), (Oriakhi & Ahuru, 2014) in Nigeria; (Mamo, 2017) and (Daba, 2014) in Ethiopia about the effect of tax reforms on revenue performance. But most of them rely on the direct effect of tax reform measures on domestic revenue but they didn't take into account the effect of tax reforms on income redistribution. Very little studies have been made on income redistribution. Therefore, the main intention of this study is to identify the major types of tax reform measures that the two case studies undertake and to analyze their effect on tax revenue; and also to examine their effectiveness in terms of income redistribution.

1.3. External Institutions Supports and Tax Reforms

In developing nations the way of how to raise tax revenues and resource mobilization are subject to a growing attention from international donors and developed countries governments. The topmost reason is the recent global economic and financial crisis which results the risk for developing countries relying heavily on external sources of financing (Byiers & Dalleau, 2011)

Various international institutions and governments such as; IMF, World Bank, World Health Organization (WTO) and the European Union (EU) play excessive role in different tax reform projects of low income and emerging countries. They provide direct advice to these countries.

The Ethiopian and Georgian governments made various tax reforms since 1998. For the success of their reforms these international institutions play very significant roles.

Today the International Monetary Fund (IMF) is the first and the dominant external institution that involves in tax reform of developing and emerging countries in general and in Ethiopia and Georgia in particular. Primarily its contribution is through the structural adjustment reforms that are required as a condition for receiving IMF loans. The financial affairs department of the IMF offers recommendations, technical assistance like ICT and surveys tax policies to these countries (Fossat & Bua, 2013).

World Bank influences tax reform databases in developing countries through lending money, providing technical assistances like ICT and through giving tax guidance. The bank provides loans to particular projects if and only if the potential borrower can encounter the conditions which are restricted by the bank. Once the loan is received, the bank requires frequent reports both from the debtor and from its own spectators on the use of the loan and on the progress of the project. This loan influences tax reforms on VAT adoptions in low income and emerging economies (Williamson, 2003).

The World Trade Organization (WTO) influences developing countries' tax reform projects through making trade liberalization or eliminating international trade constraints. Since most developing countries tax revenue mainly rely on international trade taxes, WTO‘s strategy on tax reform have large adverse consequences on tax revenue since the reduction of trade barriers reduce tax revenue through the abolishment of custom duties and excise taxes (Buettner, 2006).

The European Union (EU) also plays important roles on tax reforms for developing countries. It plays a great role on the adoption of VAT since VAT is the principal means of indirect taxation in both advanced and developing countries. The EU establishes a model, which is the source of many VAT laws in many developing countries including Ethiopia. However, since the effect of the EU and WTO is not straight forward and is less persistent due to membership grounds, the influence of IMF and WB for Ethiopia's 2003 tax reform is so pervasive (Gashaw, 2015).

In Ethiopia, the Addis Ababa action agenda (Addis Agenda) is aware of that substantial additional national public resource which is accompanied by foreign assistance as appropriate will be serious to understand and achieve the sustainable development goal. This agenda focuses on the need for support of international institutions to developing nations to improve the capacity of collecting taxes and other revenues (IMF, 2016).

In Georgia international donor assistance is vital to implement the tax reforms that are started at the end of 2003. Supporters provided support on:

- Set up information technology and other communications systems that enable electronic-filing, electronic scrutiny of taxpayer and tax official interactions,
- Counseling on restructuring tax policy and focusing on parsimoniously and economically valuable taxes but abolishing unusable, unfair taxes,
- Increasing new tax tools like risk-based audit selection,
- Providing short-term technical assistance such as; support, capacity building assistance, training, implementation of ICT systems to reduce the face to face contact of tax payers and the tax officials to save time.

2. Objectives of the Study and Research Questions

2.1. General Objective of the Study

The general objective of the study is to examine the relevance and effectiveness of tax reform measures in the light of their direct and indirect effect on economic development and social redistribution in Ethiopia and Georgia.

2.2. Specific Objectives

The specific objective includes

To review the structure of tax system and its evolution over time;

To identify various tax reform measures and to analyze their direct effect on domestic tax revenue; and

To examine their income redistribution effect (on income inequality).

2.3. Research Questions

This project work addresses the following research questions

- What is the effectiveness or direct effect of tax reform measures on state resources available for public spending (mainly tax revenues) as % of GDP?
- How far do tax measures/reforms address redistribution effects?
- What are their effects on reduction of income inequalities?

3. LITERATURE REVIEW

3.1. Objectives of Taxation

The major goals of taxation are

Raising revenue: The primary objective of taxation is to raise domestic revenue. The creation of new tax measures or the strengthening of existing measures means an increase in government income to finance various government activities. This goal indicates that the structure of taxes and tax rates have to be devised to generate more revenue (Kryeziu, 2012).

Reduction of income and wealth inequalities: Tax is an effective tool to reduce inequalities of income and wealth existing in the modern society. Government adopts progressive tax system to remove income and wealth inequalities of the people. This is because progressive taxation leads the rich people to pay more tax and the poor to pay less and this results reduction in income and wealth inequalities (WB, 2017).

Regulatory objective: There are some taxes where their primary objective is to control and regulate consumption. For instance, restraints on consumption alcohols are caused by a restriction of excise duties. Similarly, customs duties can be levied on imported goods to encourage internal production (Humbelin & Farys, 2016).

Taxation as a means of regulating the level of national income: In modern world taxation is advocated as a measure to regulate the flow of income. Taxes are used to transfer income from individuals to the government. This will change the pattern of private consumption and investment and thus influences the level of national income. Those taxes which are taken from surplus income reduce funds available for private consumption and investment (Kryeziu, 2012).

Incentive objective: The main purpose of incentive taxation is to stimulate investment activities in the desired channel and to prevent its flow into undesired channels. Several types of incentives are provided to stimulate investment activity. Examples of incentive are, tax holiday given to investors who establish investment units in underdeveloped area and an export subsidy given to export industries to boost export to foreign countries (Humbelin & Farys, 2016).

3.2. Tax System and Main Reforms Adopted to Increase Domestic Revenue Mobilization

Tax reform is taken as a development project since the post-World War II in which legal and economic concepts or models are easily transferred across borders to reform the tax systems of different countries (Stewart, 2003). When the tax reforms are on wards international institutions, developed country and tax experts have dominated the tax reform projects of the world. According to the Structural Adjustment Programs (SAPs) and the views of the Washington Consensus (WC), tax reform has served as a tool for resource mobilization. Having this SAP the western legal and economic concepts are freely dispersed into developing and emerging nations to adopt and implement tax reforms (Diamond, 2008).

Major Tax Types and Reforms

Like other developing and advanced countries, in Ethiopia and Georgia the tax system comprises of direct and indirect taxes. Direct taxes consists of employment income tax, business profit tax, rental income tax, interest income tax on deposits, income tax on dividends, tax of income from games of chances, rental income tax from property, agricultural income tax, rendering of technical services outside the country. On the other hand, indirect tax includes turn over tax; value added tax, stamp duties and international trade taxes (consists of excise tax, export duties and customs duties). Some of these major taxes are discussed as follows.

Personal Income Tax (PIT)

PIT is the most important components of direct tax and it is imposed on income of employed individuals. It is paid by the employee in each month at the time of receipt of income. In Ethiopia according to (Mamo, 2017) since the Ethiopian government made tax reforms on personal income tax in 2003, the share of PIT to tax revenue increases from 10.2% in 1990 to 10.8% in 2000 as tax/GDP increases from 8.53% to 11.11% in the same time period and it shows a rise in PIT/GDP contributes a rise in Tax/ GDP ratio.

On the other hand a study by (OECD, 2015), a cross country case study on effect of tax reforms on tax revenue performance shows an improvement in Tax/GDP ratio results from increase in the share of different tax reform components. For instance, Bangladesh experiences an increase in PIT/ GDP from 0.9% to 1% which results an increase in Tax/GDP ratio from 7.6% to 9.7% in 2009 and 2014 respectively. Similarly in Bosnia and Herzegovina an increase in PIT/GDP from

0.2% in 2006 to 2.1% in 2013 contributes a rise in Tax/GDP from 20.5% to 20.9% in the same time period. Moreover, in Georgia between 2004 and 2009, tax reforms focuses on simplifying the tax code and lowering tax rates. Since the PIT and social taxes are merge together into one and is reduced from 27% to 20%, the PIT productivity[1] increases from 0.26, to 0.30; the Tax/GDP ratio is also increases from 24.4% to 25.4% in 2009, and 2012 respectively (IMF, 2015).

A study (USAID, 2016) in Rwanda the government can improve its tax administration by increasing taxpayer outreach, providing better services, better use of information technology (IT), and improving the use of risk management in conducting taxpayer audits. Following this good tax administration environment, the contribution of PIT for domestic resource mobilization increases from 1.1% in 2001 to 3.8% in 2016 which results the country to experience a rise in tax/GDP below 10% to 16%.

In general the above studies show that in all countries as PIT increases, Tax/ GDP ratio also increases. This implies that PIT is one of the driving factors to boost tax revenue.

Value Added Tax (VAT)

VAT is one of the major components of domestic indirect tax; it is a tax imposed on consumer expenditure. A taxable person can be an individual, firm or company that requires to be registered for VAT (Mamo, 2017). According to (OECD, 2015) report in Georgia as the government introduces a tax reform at the end of 2004, the Value Added Tax was reduced from 20% to 18%. A reduction in VAT rate result an increase in the VAT Gross Compliance Ratio (VATGCR) from 0.82 in 2009 to 0.85 in 2012 which results a rise in Tax/GDP ratio from 24.4% to 25.4%.

Moreover, according to the (USAID, 2016) study in Rwanda; the Rwanda Revenue Authority (RRA) replaced an inefficient sales tax with a modern and effective tax type, VAT in 2001. The introduction of this effective tax reform improves the productivity and efficiency of Rwanda's VAT and income tax collections from 2001 to 2016 and now they are among the strongest in East Africa. As a result the contribution of VAT in domestic resource mobilization increases from 3.3% to 5.2% as Tax /GDP ratio increases from less than 10% in 2001 to 16% in 2016.

[1] PIT Productivity refers a measurement of the evolution of the tax base or of the efficiency of tax collection. It is computed by dividing the PIT/ GDP by the averages of the highest and lowest tax brackets.

In addition in Paraguay the main target of the reform in 2004 was broadening the effectiveness of tax base of VAT and expanding the number of tax payers by more than triple over next years. Tax reform policies and administration of tax are harmonized by modern custom codes designed to improve and streamline customs administration. Despite of the lower taxes the tax reforms have resulted in rising revenues. This has come from the broader base and increase compliance. The VAT Gross Compliance Ratio rose from 68 to 92, which is the best in the world, contributes an increase in Tax/GDP ratio from 8.8% in 2003 to 13.8% in 2013 (OECD, 2015). Thus, according to the OECD the VAT may be one of the most powerful factors to increase tax revenue.

Business Income Tax / Corporate Income Tax (CIT)

Business income tax is one of direct tax imposed on businesses' income/net profit realized from entrepreneurial activity. Taxable business income can be determined per tax period on the basis of the profit and loss account which can be drawn in compliance with the general accepted accounting standards. In Ethiopia corporate businesses are required to pay 30% flat rate which is reduced from 35% due to the 2003 tax reforms. According to (Daba, 2014) and (Mamo, 2017) the share of this tax to the total tax revenue increases from 12.9% in 2003 to 18.2% in 2014 contributing to the rise of the Tax/GDP ratio from 12% to 12.71%. On the other hand in Georgia due to the reduction in corporate income tax from 10% to 5%, CIT productivity increases from 0.16% in 2009 to 0.22 % in 2012 which results increase in Tax/GDP ratio from 24.4% to 25.4%. In Paraguay CIT productivity has risen from 0.06 in 2003 to 0.19 in 2012; CIT/GDP also rises from 1.4% to 2.7% and this contributes to a rise in Tax/GDP evolution from 8.8% in 12.8% (OECD, 2015).

Tax on International Trade (TIT)

In Ethiopia International Trade Tax contributes to 34.2% of the total tax revenue from 1990-2000 which make them and especially import tax is the most important source of the total tax revenue in Ethiopia. Several traded goods are subject to payment of duties and taxes according to the tariff of Harmonized Commodity Description and coding system. The custom duty paying value of any import or export goods shall be the actual total costs of the goods (Mamo, 2017) . Because of the growing liberalization of international trade, the level of trade tax has been constantly decreased in the last 20 years.

In Georgia tax on trade/ tax revenue decreases from 10.66% from 1997-2003 to 4.83% in 2004-2010 and further decreases to 1.1% in 2011-2019 while Tax/GDP ratio increases (WB, 2020).

3.3. Tax Reforms and Income Redistribution through Tax System

Income redistribution can be achieved through the taxation system and direct social transfers (Humbelin & Farys, 2016). Progressive taxation is one of the instruments to reduce income inequality.

Researchers usually observe the redistributive effect of taxes based on the design of several tax components:

- Taxes on wealth and income decrease income inequality as wealth are more unequally distributed than income, so high net-worth individuals are taxed over-proportionally. (Piketty, 2014).
- Tax of social security contributions which are usually not designed to be progressive but flat as a percentage of market income, are another important kind of tax. These taxes lead to increase inequality because only market incomes are affected through redistribution but wealth is not affected (Engler, 2011).
- Indirect taxes like consumption taxes often lead to increase inequality because lower income taxpayers need to spend majority of their income on essential goods as compared to the higher income groups (Paulus, 2012).
- Several studies often point out that infrastructure that is financed by taxes (e.g., schools, hospitals, roads) has to be taken into account when doing distributional analyses. But most studies ignore this aspect, as it requires making strong assumptions about the individual utilization of this infrastructure. But it is assumed that publicly financed infrastructure leads to a decrease in income inequality (OECD, 2008).

As taxes are designed progressively, they tend to equalize disposable income among the society. This indicates that the burden of tax needs to increase more for higher incomes (i.e higher income groups pay higher tax than the low income groups). In the case of redistribution via income and wealth taxes, two mechanisms need to be distinguished. a) the design of the tax rate, i.e. its level and progressivity; b) the deductions that are allowed to be made, which decrease the tax burden and also increase disposable income (Farys, 2018).

The major driving force behind the disposable income distribution is the reduction of inequality through the tax-transfer system and provision of social services like hospitals and schools (Atkinson & Brandolini, 2001). According to (OECD, 2008;2011) and (Wang, 2012)) most literatures show that the average redistributive effect achieved by public cash transfers is larger than that is achieved through household taxes.

3.4. The Relevance of Tax Reforms

In most developing nations like Ethiopia and Georgia, the major goal of tax reforms is to bring sustainable economic growth through raising tax revenue. (Rao G. , 2000); suggest that before 2000 the overall aims of tax reform made by the tax authorities are (i) to decrease the share of international trade taxes to total tax revenue; (i.e trade taxes are important to create a competitive exports sector rather than protecting the import-competing industrial sectors) (ii) to improve the share of domestic consumption taxes through transforming the domestic excises duties into VAT and (iii) to increase the relative contribution of direct taxes to public revenue. The other main issue of undertaking tax reforms is to address the issue of inequality (mainly to reduce income inequality) through progressive tax system.

Specifically the main goal of income tax reforms is to enhance tax collection by broadening the tax base while reducing the maximum rates. Economists also tell us that reducing income tax rates is the best policy solution especially in the case of stagnant growth and also in rapid growth. This means that decreasing income tax rates reduces the tax burden of individual tax payers and increases their tax compliance and makes the tax collection system more effective and leads the government to collect more tax revenue (McCutchen, 2016).

On the other hand, the main aim of indirect tax reforms like introduction of VAT is due to its significant role to enhance revenue, improve economic efficiency (through higher redistribution of public expenditures. This may be because VAT can be used by the government to finance public goods and build better infrastructure as incentive to economic activities. As a result it contributes for a better allocation of economic resources and develops economic efficiency) and foster growth (by broadening the base of VAT through decline in tax rates and exemptions is more advantageous to higher long-run growth). However, widening of the tax base, the rise of the tax rates, and the choice of tax exemptions has differential effects on the income of different group of individuals. This means that such reforms hurt the poor individuals when tax base rise (Muñoz & Cho, 2003).

3.5. Tax Reforms in Ethiopia

A large number of studies show that in developing countries tax reforms are used to serve multiple objectives such as mobilization of resources to finance government expenditure; promoting saving and investment; stimulating the use of labor intensive technologies typically the small and medium scale enterprises, whereby bringing about greater equity in distribution of income (Rao, 2000) and (Islam, 2001).

The Ethiopian government has introduced tax policy reforms since 1992 with a view of improving tax revenues collection. The major objective of the reform is raising the tax revenue to GDP ratio from less than 10% to 18-20%. Following a major economic shift from central planning to market oriented system by the year 1992/93, the country undertook various policy measures. During this time poverty eradication strategy of developmental program and the transition of the government system are the main driving internal factors for the tariff and tax reforms. These reforms were made because of the outdated tariff and tax laws and their failure to attract investment; weak tax administration and customs to facilitate trade and to generate adequate revenue to cover current and capital expenditure (Bogale, 2013) and (Daba, 2014).

Consequently with a continuous reduction in the import tariff, excise tax and income tax and widening of the budgetary deficit, the Ethiopia's tax reform program has introduced VAT since January, 2003 which is a neutral, superior, efficient and most popular tax reform with governments around the world. VAT is a tax on consumption and usually introduced as a replacement for sales tax and levied at all stages in the value chain (Bogale, 2013) and (Daba, 2014). Ethiopia's standard rate of VAT is 15% for goods and services (Daba, 2014).

According to (Dos & Santos, 2002), VAT exemptions should be kept to a minimum level to broaden the tax base and to facilitate compliance by taxpayers and control by the tax administration. There should be only one positive rate. Several rates make the administration more complicated and encourage evasion. However, the implementation of this tax system faces several challenges such as rampant corruption, weakness of the tax administration, a low adult literacy rate, shortage of standard recordkeeping systems and lack of knowledge about VAT.

Table 3. 1: Summary of Tax Reforms and Issues to be discussed in Ethiopia

Taxes	Reforms	Issues to be discussed
VAT	Introduced in 2003 with a standard rate of 15%	-Broaden the tax base -Increase number of registered tax payers -Avoid tax evasion and facilitate tax compliance
Import tariff	-Reduction in import tariff through trade liberalization (the rate varies for various goods) - In 2003 categorizing imports into 97 groups	-Reduce tax burden -Protect infant importers - Increase efficiency
Excise tax	- In 2019 tax rise on used imported cars up to 400% -Tax increment on beverages & perfumes (100%) -Reduction of tax on new imported cars (100% to 30%)	-To protect the risk of overused import cars - Protection of local industries -To protect domestic residents from addiction -Revenue generation
Income tax	-Reduction on tax rate of BIT from 35% to 30% and for PIT from 40% to 35% in 2003 -Business income taxes categories A,B and C based on tax payers annual income, 2003 -In 2016 a new tax bracket on PIT	-Reduce the tax burden -Broaden the tax base -Increase tax compliance and efficiency

The Administrative Reform

Presently the low tax to GDP ratio sounds for reform not only on the tax rates but also on its administration. To improve tax compliance the Ethiopian government undertakes some measures such as enhancing tax related education, discussing with tax payers, improving the necessary office facilities and modernizing tax administration, improving the incentives of tax officials and reducing the tax burden. Moreover the reform improves application of the business income tax by replacing the earlier assessment method of plausible tax that had been based on estimates with a more simplified standard method less vulnerable to corrupt practices (MoR, 2003).

3.6. Tax Reforms in Georgia

The government of Georgia adopts communist economic system starting from 1992, after its independence in April 1991. Prior to 2004 many failures in tax system led Georgia to abandon its previous way of taxation and succeed with simplifying, reducing rates, and using digital tax system. This significant change is possible only after taking full responsibility of economic policy after many years of crisis and economic stagnation, a rampant corruption and huge government mismanagement, and imprecise foreign advice. Following the new institutional demands, Georgia adopted a tax reform system at the end of 2004 to ensure the government's operations (Jandieri, 2019).

Based on the IMF proposed tax system for nations transitioning from communism to market economies, the Georgian government made about 300 amendments to the tax code between 1997 and 2003. But it makes the tax system difficult and impossible to follow how and when to pay taxes based on the tax code. In addition tax authorities' face worry about how and when they collect taxes. Consequently the tax system becomes an extreme burden to taxpayers and a hindrance on the Georgian economy (Narmania & Khokrishvili, 2009); (Jandieri, 2019).

Having the Rose Revolution in 2003, in 2004 the new government insists to improve the performance of the economy by introducing a new tax reform and by 2005 the government implemented the new tax code.

According to the Ministry of Finance of Georgia (2011), the main purposes of the tax reform are: reducing tax burden and elimination of 15 types of taxes, eliminating all unimportant and ineffective intervention of the government into private sectors; lowering tax rates; holding tax and customs agencies under the ministry of finance; implementation of simple and fair rules; setting up modern tax collection system; creation of taxpayers data base; reduction of corporate income tax from 20% to 15% in 2008; merging personal income and social taxes into one and the rate is reduced from 27% to 20%; reducing VAT rate from 20% to 18%; reducing corporate profit tax and tax on interest payments from 10% to 5%; abolition of bureaucratic barriers; fight against corruption; eliminate red tape and improving institutional capacity

3.7. Empirical Literatures Review: Effects of Tax Reforms on Public Revenues, Income Redistribution and Social and Economic Development

In developing and underdeveloped countries tax reform is a vital component of strategy for structural adjustment and reopening of growth. As (Musgrave, 1998) has point out that tax reform in developing countries faced central problem of revenue requirements and how to fit the revenue structure into development policy. Among the more specific tax issues, attention should be given to the composition of the tax structure and to the design of its major components.

(Muriithi & Moyi, 2003); conduct a study on tax reforms and revenue mobilization in Kenya. The study uses tax elasticity and buoyancy to determine whether tax reforms in Kenya reduce fiscal deficit or not. They compute tax elasticity and buoyancies for both pre-reform and post-reform periods. Their finding reveals that tax reforms has a positive impact on the overall tax structure and on the individual tax handles. Even though tax reforms has a positive impact the reforms fails to make the responsiveness of VAT to changes in income, although VAT is the principal actor in the tax structure.

An empirical study is conduted by Geda & Shimeles (2005) on taxes and tax reform in Ethiopia, from 1990-2003 using a household data to show the analysis of the distributional impact of tax reform in Ethiopia. Their analysis provides that the distributional impacts of the benefits of freely provided services such as education are examined. The result indicates that primary education is more uniformly distributed as compared to secondary level education, suggesting that the non-poor benefit disproportionately free from secondary level education.

(Abdella & Clifford, 2010); investigate the impact of tax reform on private sector development in Ethiopia concentrating on pre and post-tax reform periods revenue performance of the tax structure. They evaluate the overall economic sectors of the country and their result shows that the government shifts its attention towards domestic sources of revenue to compensate downward pressures on customs tariffs, (tariff revenue losses). Moreover their findings proposes that tax reforms have positive impact on the overall tax structure for revenue generation in the short term; but it may have less desirable effect in long run.

(Oriakhi & Ahuru, 2014); analyze the impact of tax reforms on tax revenue generation in Nigeria using a time series data ranging from the year 1981-2011. They use different types of income taxes as a proxy for tax reforms. The Granger causality test result shows that custom and excise duties and VAT granger causes tax revenue. In addition, the error correction model (ECM) indicates that taxes like VAT, petroleum profit tax, company income tax and custom and excise duties have a positive and statistically significant effect on tax revenue. In general their study shows that tax reform by improving the tax system and reducing tax burden enhances the ability of the government to generate more revenue. The study also provids among the various taxes VAT, custom and excise duties provide good tax handle for the government to maximize its revenue.

(Daba, 2014); conduct a study on the effect of tax reforms on tax revenues performance in Ethiopia using a time series data ranging from 1975-2013 to compare the pre and post-tax reforms. His finding shows that when he compares the pre and post-tax reforms between the period 1991/92 to 2012/13 the ratios of various categories of tax revenues show insignificant change in the post reform period. Thus, the result discloses that tax reforms are unsuccessful to boost total tax revenues and to bring tax structure change from indirect tax to direct tax.

A cross country study (OECD, 2015) is conducted on the effect of tax reforms on domestic resource mobilization in seven developing and emerging countries namely, Afghanistan, Bangladesh, Bosnia and Herzegovina, Georgia, Paraguay, Rwanda and Vietnam. The result illustrates that tax reform has a significant increase in the tax/GDP ratio. Broadening the tax base; registering taxpayers; simplified tax procedures; and fighting corruption were important tools for supporting tax reform and tax collection. These reform measures are the key to increase tax revenues to deliver important gains in efficiency.

(Mamo, 2017); investigates a study on the impact of tax reform on the revenue productivity of the Ethiopian tax system using a time series data ranging from 1975-2014. The OLS regression result indicates that tax reforms have an overall positive impact on tax responsiveness. The tax reforms are more effectively increases elasticity of the base income components and less effective to the lower elasticity of income components.

An empirical study by (Gustafsso & Schwarz, 1991) shows the impact of the tax reforms on income distribution in Sweden using a micro simulation model. Significantly lower tax rates, a broader tax base, and bigger allowances to families with children are the major tax reforms undertaken. They found that tax reform has no much adverse effect on income distribution which is described by the Lorenz curve: the increase in inequality which resulted from the changes in tax rates is cancelled by the changes in other components of the reform.

(Munoz & Cho, 2003); employ an empirical analysis on assessment of poverty and social impact of tax reform in Ethiopia using the 1999 household income, consumption and expenditure survey. Their result depicts that the VAT reform has not a much negative effect on the poorest 40% of the population. In addition, higher revenues brought by VAT can provide additional funds for poverty reduction, and social redistribution like expanding primary schools.

An empirical study by (Immervoll & Richardson, 2011) on the impact of taxes and transfers on income inequality for the past 25 years across countries suggests that in most countries tax-benefit policies offset some of the large increases in market income inequality, even though such policies were less effective since the mid-1990s.

(Jalata, 2014); analyzes the role of VAT on tax revenue of Ethiopia in a time span from 2003 to 2012. He found that VAT has a better influence on tax revenue of Ethiopia relative to sales tax. The finding also reveals that, the share of VAT is statistically significant at 5% significance level. However, VAT, to be effective, there should be strong tax administrations system and cooperation's of the tax payers with the tax authorities and the government.

(Daniel, 2012); using a secondary data for ten years (2000-2009) analyze the effect of tax reforms and economic factors on tax revenues in Kenya. He observes that Kenya introduced the tax modernization program in 1986 with the hope that this would enhance revenue collection. His study concludes that tax reforms have negatively contributed to tax revenues in Kenya while economic conditions (GDP) have positively impacted on revenues.

Increasing tax is not the only objective additional revenues should contribute to macroeconomic stabilization as well as to provide an enlarged source for financing development and for reaching the SDGs. The rise in tax revenues should contribute to increase social spending on health and education. According to the (OECD, 2015) report for Georgia in 2010, public health spending per capita rises from $75 in 2003 to $349 in 2010 which is equal to 2.3% of GDP. Similarly, public spending on education increased from $19 in 2003 to $70 in 2010 which is nearly 3% of GDP.

To sum up, several developing countries have undertaken various tax reforms at different time periods to generate adequate public revenue that helps for the development of social infrastructures such as schools and hospitals and as well as to reduce income inequality. As the literatures suggest that for some countries tax reforms on VAT, BIT or CIT contribute more for the rise of tax revenue but for others because of weak tax administrations the reform might not be as much effective. On the other hand, for countries like Kenya tax reform has a negative effect on domestic tax revenue. Moreover, tax reform plays an important role on income distribution. For some countries the reform has not a negative effect on income distribution while for a few countries the reform aggravates income inequality. As a result, the quality of tax administration, level of transparency and accountability in the tax system, the way of implementation of fair and simple tax rules, setting up modern method of tax collection system, creation of taxpayers' data base, reducing tax rates and level of fighting against corruption determine the success of effectiveness of tax reforms.

4. METHODOLOGY OF THE STUDY

In the preceding section theoretical and empirical literatures about how to measure the effectiveness of various tax reforms and their redistribution effects are presented and discussed. Here the main objective of this paper is to analyze the relevance and effectiveness of tax reform measures on domestic public revenue and on income inequality. The methodology is developed based on the theory, related literatures on developing countries and taking in to consideration of Ethiopia's and Georgia's economy.

4.1. Data Types and Sources

To complete this study a secondary time series data is employed running from 1995 to 2019 based on availability of data for all variables taking into consideration. These time series data are collected from national data sources like; National Bank of Ethiopia (NBE), World Bank Data Base (WDI); IMF Data Base; and United Nations University World Institute for Development Economics Research.

4.2. Method of Data Analysis

For the presentation of data this study uses descriptive method of data analysis using statistics tools such as; percentages, graphs and tables to show the effect of tax reform measures on public revenue and on income inequality. The descriptive analysis is also important to see the trend of each tax performance measurements and tax revenue both in Ethiopia and Georgia.

4.2.1. Effectiveness of Tax Reform Measures on Public Revenues

Different scholars analyze how various tax reform measures such as agricultural income tax, capital gain tax, import tariffs, excise duties, personal income tax, corporate dividends and profit taxes, VAT and business income tax contribute to increase public revenue and income redistribution. Some of them use total tax revenue, and some others take Tax/GDP ratio or Tax revenue /Total revenue to measure domestic public revenue.

Both Ethiopia and Georgia conduct various tax reforms in different time periods on: various tax components, tax policy, tax administration and tax codes. However, based on the availability of data for both nations this study mainly focuses on tax component reforms such as reforms on personal income taxes, taxes on businesses and corporates income, indirect taxes on consumption good (VAT), and international trade taxes (consist of custom duties on imported goods, export duties and excise taxes). In addition, for public revenue the study uses Tax/GDP ratio as a measurement tool.

4.2.2. Effectiveness of Tax Reform Measures on Income Redistribution

Income redistribution describes the transfer of fund from the high income to the low income individuals. It can be achieved through progressive taxation system (Humbelin & Farys, 2016). Progressive taxation has the possibility of reducing income inequality. As taxes are designed progressively, they tend to equalize disposable income among the society. This is because the burden of tax needs to increase more for higher incomes than the low income groups which reduces income inequality between the poor and the rich individuals (Humbelin & Farys, 2016).

The effectiveness of tax reform measures on income inequality can be described using Gini Coefficients. Gini Index is a measurement of economic inequality, measuring income distribution and as well wealth distribution among a society.

Gini index ranges from a value zero to 100. A Gini coefficient value, zero represents absolute income equality or zero income inequality while 100 indicate the presence of perfect income inequality and a Gini index close to zero shows a decline in income inequality whereas a value close to 100 represents an increase in income inequality.

Table 4. 1: Variables, Definition, Measurement and Data Sources

Variable Name	Definition	Measurement unit	Source/s
Tax	Domestic Tax Revenue	In millions of domestic currency	NBE, World Bank
GDP	Gross Domestic Product	In millions of domestic currency	World Bank
PIT	Personal Income Tax	In millions of domestic currency	NBE, UNU WIDER[2]
CIT	Corporate Income Tax	In millions of domestic currency	NBE, UNU WIDER
VAT	Value Added Tax	In millions of domestic currency	NBE, UNU WIDER
TIT	Tax on International Trade	In millions of domestic currency	NBE, UNU WIDER
Gini	Gini Coefficient Index	Index	UNDP, World Bank

[2] Where UNU WIDER represents United Nations University World Institute for Development Economics Research

5. RESULTS AND DISCUSSIONS

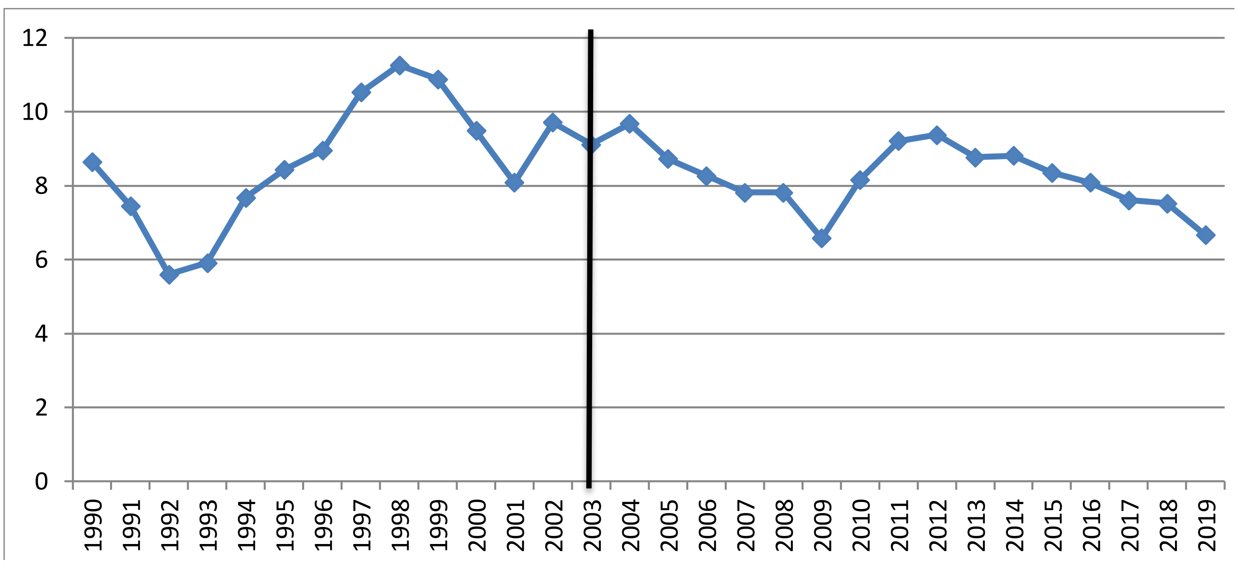
5.1. Trend and Structure of Tax Revenues

In this section the trend of tax revenue per GDP; the share of tax revenue to total public revenue and the evolution of direct and indirect taxes are discussed for the two case studies.

5.1.1. Trend Analysis of Tax Revenue in Ethiopia

As shown on figure 5.1 below the overall pattern of total tax revenue (% of GDP) in Ethiopia shows an increasing trend for the period between 1992 to 1998 and from 2009-2012. However, from 1998 to 2001 and for the last eight years there is a continuous decline in Tax/GDP ratio.

Figure 5. 1: Trend Analysis of Total Tax Revenue (% of GDP) in Ethiopia



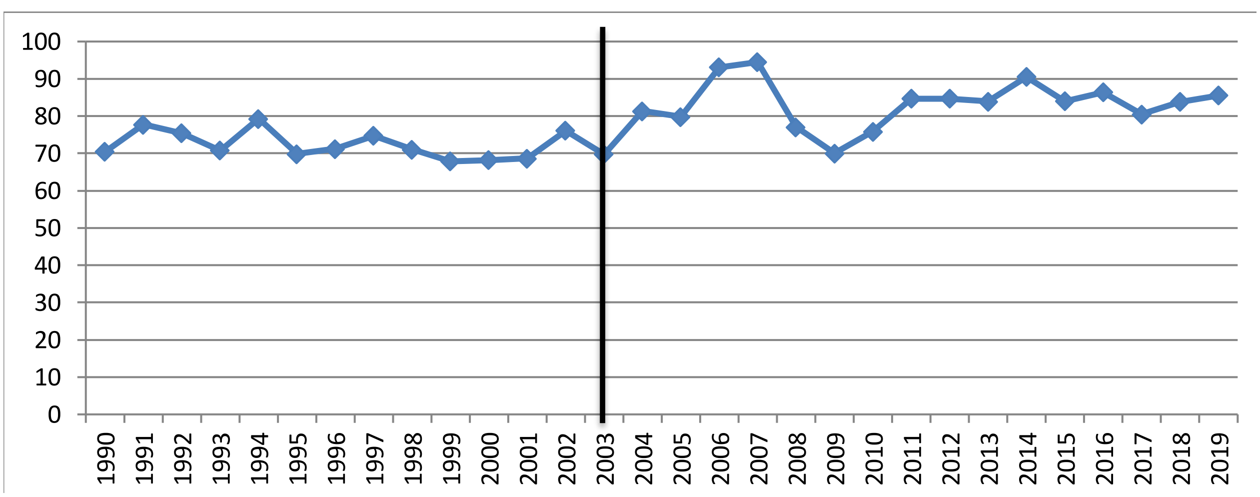
Source: World Bank data base, 2020

In the year 1990 to 1992, tax per GDP is continuously decline and reaches its minimum in 1992. This is because of the transitional government of Ethiopia from the military power to the current government. Because of high intervention of the government in all economic activities and the emergence of civil war the performance of the economy was the worst in the military regime. This contributes to low tax collection capacity of the government in early 1990s. But when the current government comes to power in 1992 it makes the economy liberalized once again there becomes improvement in the economy. The tax to GDP ratio increases until 1998. However, it back to decline since 1998 to 2001, because of the Ethio- Eretria war.

In the post reform periods the minimum tax share to GDP (6.5%) is registered in 2009. This is due to the existence of global financial crisis of 2008. The crisis causes a rapid worldwide economic shock which results several bank failure. During this period worldwide economies were slowed down since credit tightened and international trade declined. Saving was very low, unemployment rose; several businesses failed resulting in much decline in earning. These factors contribute for the fall in tax revenue per GDP (Teshome, 2008).

When we compare the share of total tax revenue to GDP before and after the reform, on average Tax/GDP in pre-reform period (1990 to 2003) stood at 8.2%, while in the post reform periods (2004-2019) its share increases very slightly to 8.5% (only 0.3% higher than the pre-reform period). This implies that even though the Ethiopian government made tax reforms on various issues but the reform doesn't bring a significant increase in tax revenue to GDP ratio. In general a continuous decline in tax/GDP ratio is shown since 2012. This declining trend is worrying because tax revenue represents the most important and a growing share of total revenue. The factors that derive for the decline may be i); tax revenue increases at lower rate (because of the fall in growth of TIT) than that of nominal GDP ii); the existence of rampant corruption iii); weak tax administration iv); lack of modern taxation system v); lack of tax compliance vi); tax evasion and tax fraud.

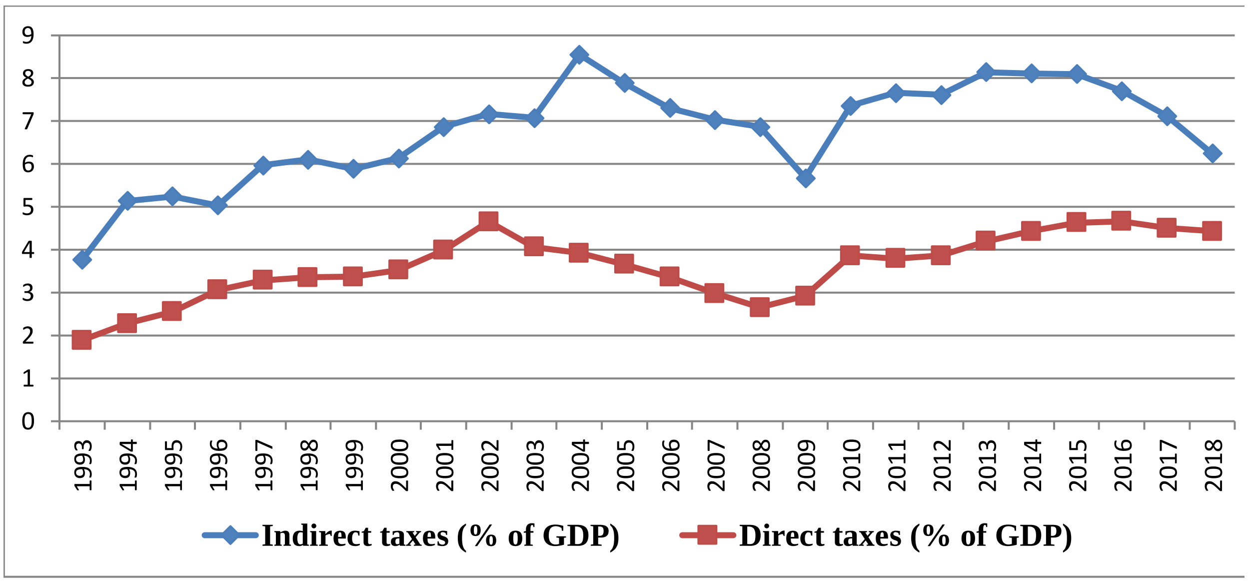
Figure 5. 2: Trend Analysis of Tax Revenue/ % of Total Revenue



Source: World Bank data base, 2020

We can observe from figure 5.2 above that tax revenue covers the lion share of total tax revenue (on average of about 78.2% in the study period). Other non tax revenues account only 21.8%. The figure also shows that there is an increasing trend of tax revenue share to total revenue. Before the reform period (1990-2003), on average the share of tax revenue to total revenue is about 72.2% and it increases to 83.5% after the reform period (2004-2019). It reachses at its peak (94.5%) in the year of 2007 but the financial crisis of 2008 lowers its share to 70% in the year 2009.

Figure 5. 3: Trend Analysis of Direct and Indirect Taxes Revenue (% of GDP)



Source: UNU-WIDER and WB data bases, 2020

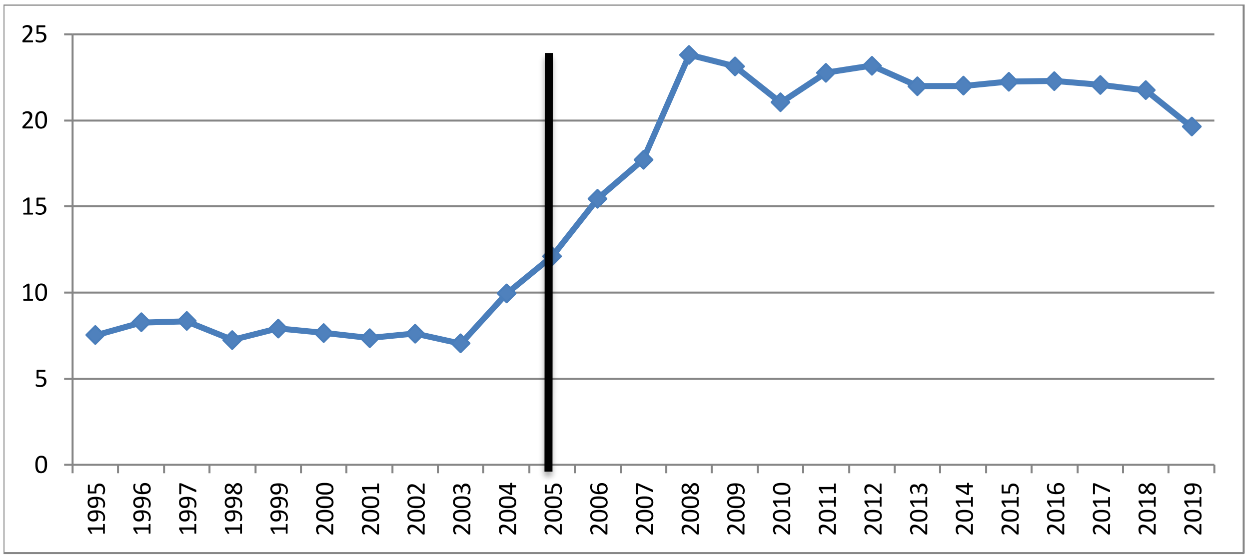
The Ethiopian governement collects taxes from both direct and indirect tax sources. But as shown in figure 5.3 above the share of indirect taxes to GDP is larger than that of direct taxes. The governement generates large amount of taxes from indirect taxes. The trend of both tax types is increasing over time in the study period (1993-2018), they follow the same trend. But both taxes per GDP ratio were low in 2009 due to the global financial crisis of 2008.

When we see their share to GDP before and after the reform periods, on average the direct taxes share to GDP is 3.3% from 1993-2003 while it increases to 3.9% from 2004-2018. On the other hand, the indirect tax to GDP ratio increases from 5.9% to 7.4% in the same time period. But the indirect taxes continousley decline since 2014 due to the fall of TIT. Thus, the tax reform leads a slight increase in the share of both direct and indirect tax to GDP but with a better effect for indirect than direct taxes.

5.1.2. Trend Analysis of Tax Revenue in Georgia

From figure 5.4, below we can observe that Tax/GDP ratio in Georgia increases over time. There is a sharp increase from 2004 to 2008, this is due to tax reforms undertaken, especially in 2005 the Goergian government made most effective reforms on various tax components such as on PIT, CIT and VAT and as well on the tax administration system.

Figure 5. 4: Trend Analysis of Total Tax Revenue (% of GDP)



Source: World Bank data base, 2020

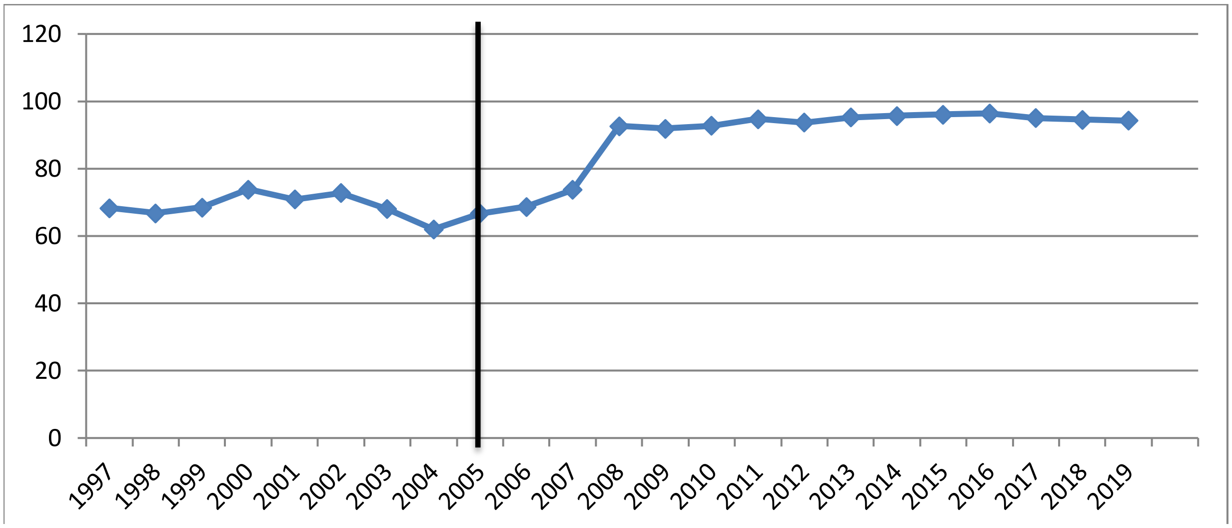
But before the reform, the trend of tax revenue per GDP ratio seems like more stable which is between 7.03% and 9.9%. This is due to the fact that tax collection was difficult because of lack of a well-functioning administration agency, low performance of tax payers' compliance, and corruption before 2005 (Jandieri, 2019).

As we see the evolution of tax revenue to GDP share pre and post reform periods, on average from 1995-2005, the share of tax to GDP ratio is 8.3% and it becomes about three fold (21.4%) from 2006 to 2019 which is the most significant change shows that the governement made effective reform on tax policies and tax administration. But the Tax/GDP ratio declines since 2017 because GDP increases at faster rate than tax revenue.

When we compare the trend of Tax/GDP ratio of Ethiopia with that of Georgia, one can cleary identify that the reform brings a more significant increase in tax revenue for Georgia than

Ethiopia means that the reform works better for Georgia. Like that of Ethiopia, as we see from figure 5.5 below for Georgia also the largest share of total revenue comes from tax revenues. This indicates that for developing countries tax revenue is the major source of government revenue.

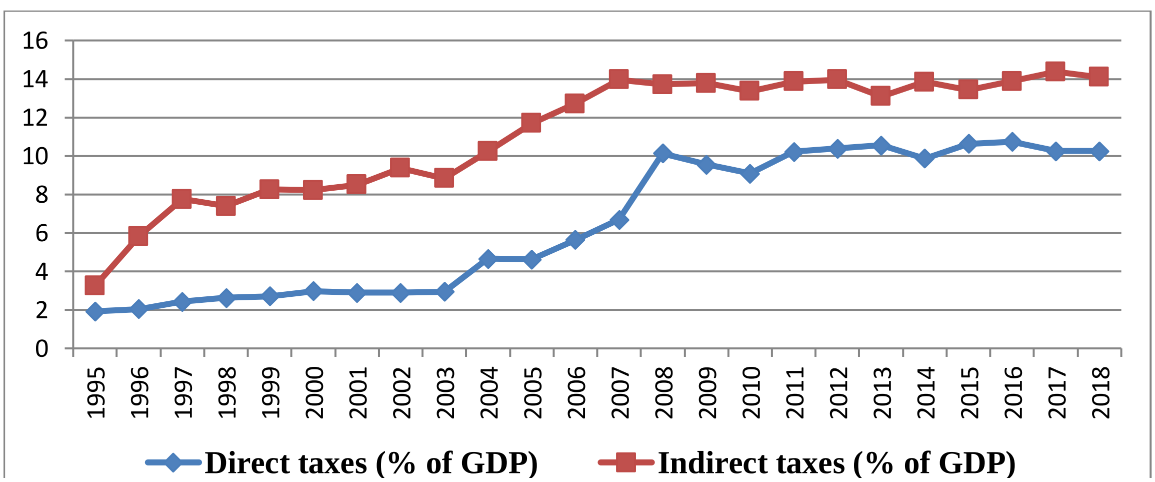
Figure 5. 5: Trend Analysis of Total Tax Revenue /% of Total Revenue



Source: World Bank data base, 2020

Before the reform period the average tax revenue per total revenue is about 68.7% (from 1997 to 2005) and it increases to 91.1% in post reform periods, 2006-2019. It is obvious that since the tax reform has a greater impact on tax revenue the increase in tax revenue increases its share to domestic public revenue in the post reform periods.

Figure 5. 6: Trend Analysis of Direct and Indirect Tax Revenue (% of GDP)



Source: UNU-WIDER and WB data base, 2020

Similarly with Ethiopia the Georgian governement also collects more revenue from indirect tax sources than direct taxes. As shown on figure 5.6 above, both direct and indirect taxes have increasing trend from 1995 to 2018. The share of direct tax increases from 1.9% to 10.3% (five fold) while indirect tax per GDP ratio increases from 3.2% to 14.1% (4.4 fold) from 1995-2018. Thus, a sharp increase in both direct and indirect taxes results a large increase in total tax per GDP ratio.

Table 5. 1: Summary of Major Categories of Taxes (% of GDP):1993-2018

	Ethiopia		**Georgia**	
Type of taxes	Pre- reform (1993-2003)	Post- reform (2004-2018)	Pre- reform (1995-2005)	Post- reform (2006-2018)
Direct Taxes to GDP	3.3	3.9	2.98	9.54
Indirect Taxes to GDP	5.9	7.4	8.12	13.7
Total Tax Revenue to GDP	8.2	8.5	8.3	21.4

Source: NBE, UNU-WIDER and WB data base, 2020

As shown in table 5.1 above, in both case studies direct taxes, indirect taxes and total tax revenue per GDP ratio are greater in the post reform periods than the pre reform periods. But a huge rise in their share to GDP is found in Georgia than in Ethiopia in post reform periods. Thus, it illustrates that the tax reform is more powerful for Georgia than Ethiopia.

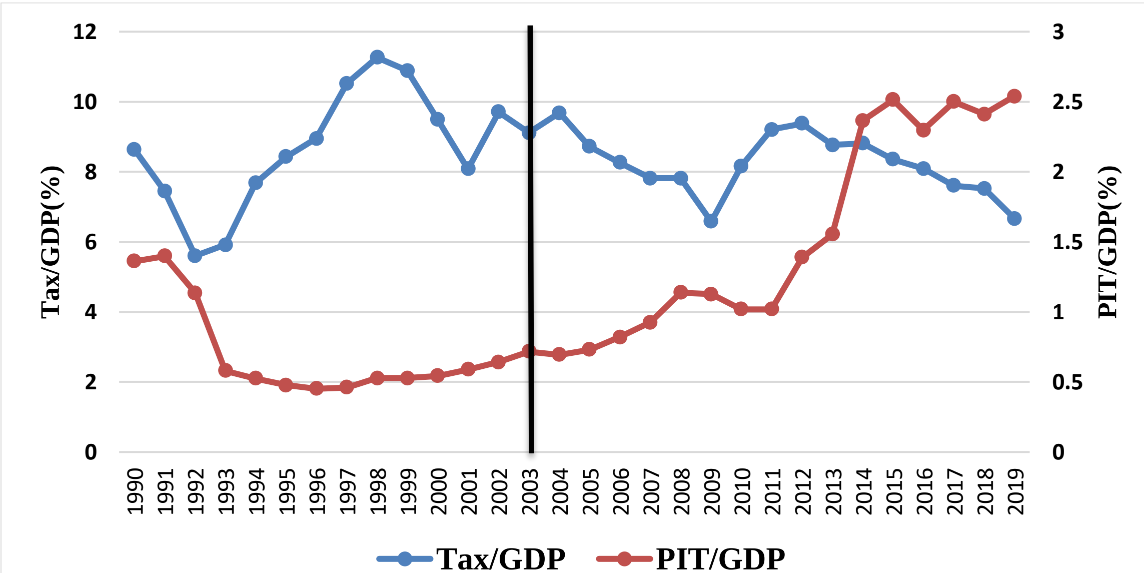
5.2. Trend Analysis of Tax Reforms Effectiveness on Tax Revenue

In this section the trend analysis of each tax reform measure effectiveness on tax revenue in the entire time period under review both for Ethiopia and Georgia is discussed.

5.2.1. Trend Analysis of Tax Reform Measures Effectiveness on Tax Revenue in Ethiopia

Figure 5.7 below illustrates the trend analysis of share of personal income tax and total tax revenue to GDP. From this graph, (5.7), we can see that the evolution of PIT seems like stable in the period between 1994 to 2004, which ranges from 0.45% to 0.6%.

Figure 5. 7: Trend Analysis of PIT/GDP and Tax/GDP

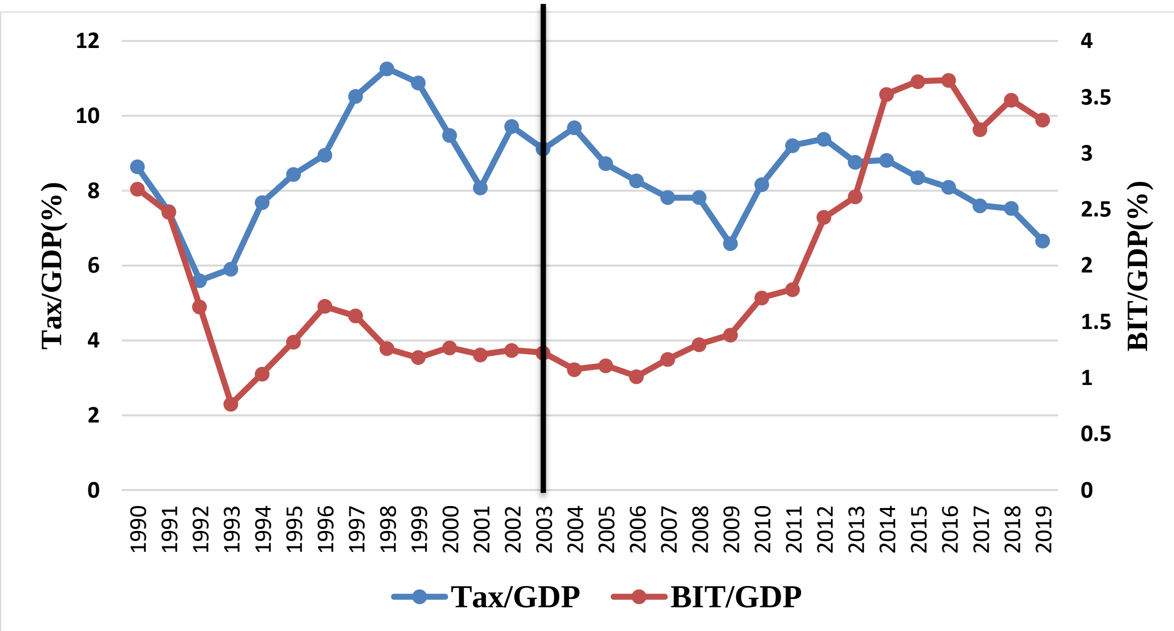


Source: NBE and WB data bases, 2020

On average, the share of PIT/GDP before the reform (1990-2003) is 0.74% while it increases to 1.6% for the last sixteen years (2004-2019), in post reform periods. On the contrary of pre 1994, for the last nine years its trend continuously increases. Since 2014 PIT/GDP increases sharply implies the reform has reached its peak and PIT follows GDP evolution. This means that reform on PIT contributes a rise in the evolution of PIT/GDP and results an increase in its contribution to total tax revenue. Therefore, the reform works well and PIT contributes more for tax revenue for the last six years.

But PIT/GDP is not as much effective to boost tax revenue prior to 2014. This may be because of the fact that PIT is collected from income of individuals' employment which depends on educational level. However, in Ethiopia there are large numbers of individuals who are illiterate. According to UNESCO report in 2018 the adult literacy rate of Ethiopia was only 51.77%. Thus, because of huge illiteracy rate and large rate of unemployment, the government collects small amount of tax revenue from PIT and results a negligible effect on total tax revenue and its GDP share before 2014.

Figure 5. 8: Trend Analysis of BIT/GDP and Tax/GDP



Source: NBE and WB data bases, 2020

As shown in figure 5.8 above, similar with that of personal income tax, business income tax also follows the same trend with Tax/GDP until 2012. BIT seems to have constant trend from 1998-2006 which ranges from 1.01% to 1.25% but it continuously increases for the last thirteen years except in 2018 and 2019 (may be because of the fall in corporate profits).

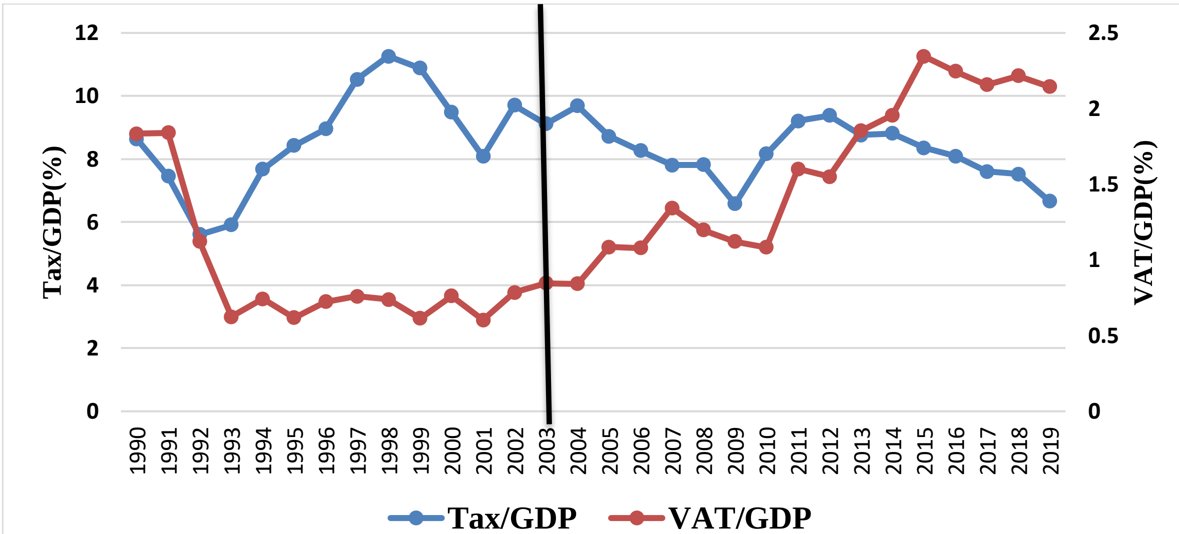
On average its share to GDP is 1.5% from 1990 to 2003 while it increases to 2.3% for the last sixteen years (2004-2019) while the average tax per GDP ratio increases from only 8.2% to 8.5%. A sharp increase in BIT/GDP is shown after 2014. Thus, BIT contributes more to tax revenue for the last five years and the reform becomes more effective. But prior to 2014 there is no significant change in the evolution of BIT/GDP and contributes less for tax revenue.

As compared to the PIT since the share of BIT/GDP is greater it has a better effect on tax revenue. Thus, business income tax is more effective than PIT to boost tax revenue.

As we see from figure 5.9 below, there is an improvement in the trend of VAT to GDP for the last fifteen years but it seems like more stable before and at the early of 2000s.

International organizations like IMF and WB, treatise on the modern VAT (Ebrill, Keen, Bodin, & Summers, 2001); argued convincingly that the principal feature of a modern VAT is that it is a self-assessed tax. The appropriate role of the tax administration with such taxes is not to assess who owes what but instead, to speak, to guard the borders of the system and to validate that those who should be self-assessing are behaving as they are supposed to do so.

Figure 5. 9: Trend Analysis of VAT /GDP and Tax/GDP



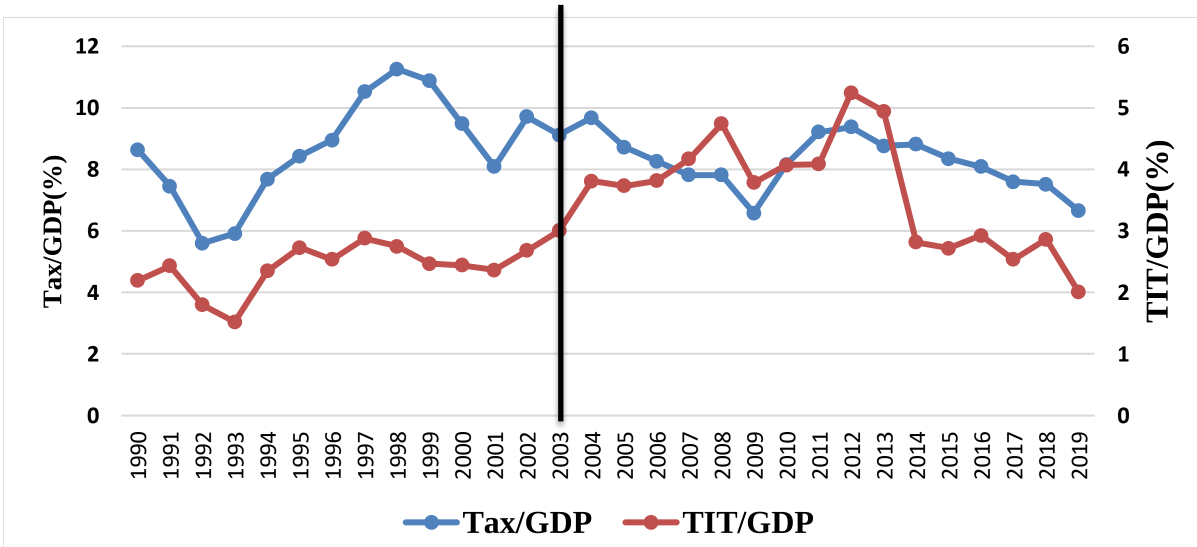
Source: NBE and WB data bases, 2020

When we compare the share of VAT to GDP in pre and post reform periods, on average VAT/GDP ratio is 0.9% (1990-2003) while it increases to 1.6% (increased by 77%) during the post reform period (2004-2019) when the tax per GDP ratio increases only from 8.2% to 8.5% in the same time period.

The reform brings a sharp increase in VAT/GDP (the VAT reform reaches its peak) and a relative improvement in VAT revenue since 2014 and stabilizes the economy. As a result VAT has brought useful additional revenues to compensate the reduction of trade taxes after 2014. This means that the pace and interest for fiscal reforms have been slightly higher than before. But the evolution of VAT and its contribution to tax revenue are relatively small (VAT/GDP ratio is under its potential) prior to 2014. This is because of large tax evasion and extensive corruption, weak tax administration, very low adult literacy rate, shortage of standard recordkeeping systems; and lack of knowledge about VAT by individuals which is resulted from weak awareness of the government about VAT.

This finding is consistent with the result of (Muriithi & Moyi, 2003), although tax reforms had positive effect on tax revenue, the reforms couldn't bring more responsiveness of VAT to increase in tax revenue, even if VAT plays a major important role in the tax structure.

Figure 5. 10: Trend Analysis of TIT/GDP and Tax/GDP



Source: NBE and WB data bases, 2020

Developing nations' tax revenue mostly relay on international trade tax Ethiopia is not an exception. Although the Ethiopian government made tax exemption on export commodities but until now it imports huge industrial goods. So the share of international trade to GDP is the largest as compared to the other tax components (Mascagn, 2014).

Figure 5.10 above, shows that the share of international trade tax to GDP ratio shows an increasing trend over time but we can observe that there is a declining pattern for the last seven years. The reduction of TIT is mainly because of world trade liberalization and commitment made to WTO to reduce trade barriers and also the nation adopts some import substitution mechanisms. But as compared to the pre reform period, its share to GDP is a bit large; it increases from 2.4% (1990-2003) to 3.6% during 2004-2019. This result is in line with the work of (Demirew, 2005); exemption of tax on export goods except coffee and reduction in custom duties on some imported goods like new cars reduce tax revenue from foreign trade.

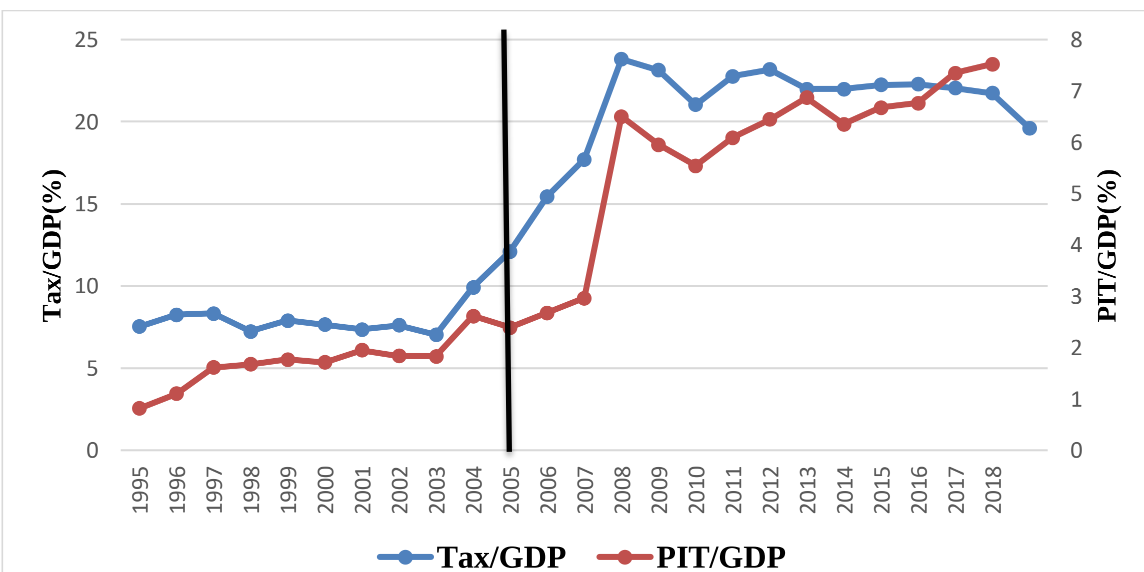
5.2.2. Tax Reform Measures Effectiveness on Tax Revenue in Georgia

This sub section discusses about the effectiveness of each tax reform measure on tax revenue of Georgia.

After 2003 Rose Revolution, the new Georgia's government begins an aggressive agenda of legal, monitoring, and institutional reforms which are targeted to eliminate public sector corruption, improve tax collection and to establish an attractive environment for business investment. Social contribution tax and personal income taxes are merging together in a single tax and set at a maximum rate of 20%.

Figure 5.11 below clearly demonstrates that both personal income tax and total tax per GDP ratio have the same trend throughout the study periods. We can observe that PIT/GDP is quite low (1.75% of GDP) and more stable and total tax/GDP is also small, 8.3% during the pre- reform periods (before 2005). While in the post reform periods, both taxes have shown increasing trend especially Tax/GDP increases sharply. For the last thirteen years (2006-2018) the PIT/GDP on average is 5.98% and the total tax share to GDP becomes 21.4%.

Figure 5. 11: Trend Analysis of PIT/GDP and Tax/GDP



Source: UNU-WIDER and WB data bases, 2020

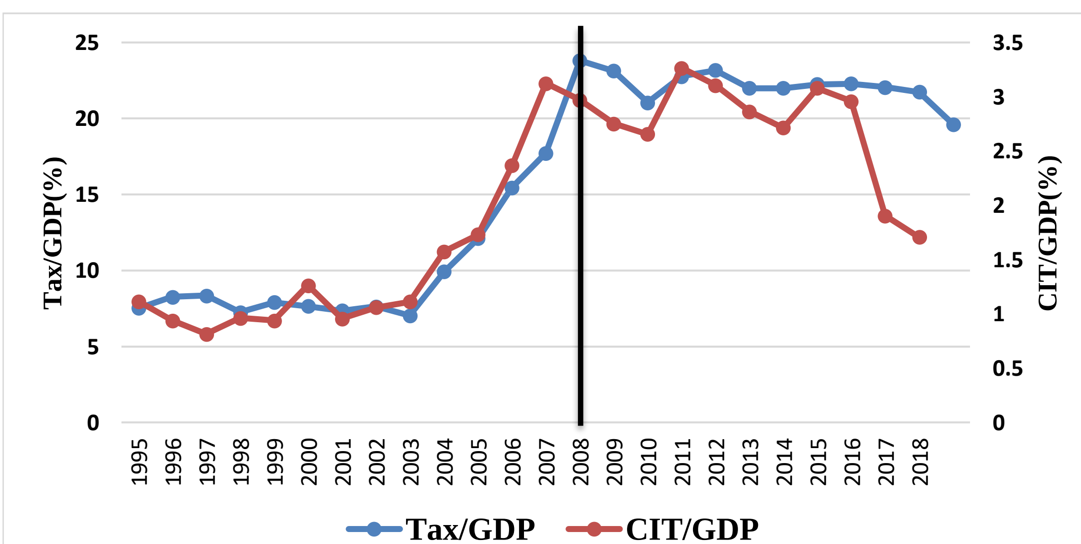
Thus, we can understand from figure 5.11, the reform brings a significance change on both PIT/GDP and Tax revenue. This implies that the tax reform on PIT plays a substantial role to boost tax revenue. This result is consistent with the finding of (Muriithi & Moyi, 2003) (Abdella & Clifford, 2010) (Oriakhi & Ahuru, 2014) (OECD, 2015) (Mamo, 2017) that tax reforms had a positive effect on the overall tax structure of tax revenue generation.

In Georgia the main objective of the corporate tax reform is to create jobs, promote entrepreneurship, increase sustainability of companies and create attractive environment for business investment to private sectors. This is done through reduction of BIT from 20% to 15 % and CIT and dividends from 10% to 5% in 2008 which shrink the tax burden of businesses and corporates.

As figure 5.12 below depicts that similar with that of personal income tax, CIT/GDP is also more stable up to 2003, while it shows an improvement since 2004. In the pre reform periods, 1995-2008, on average CIT/GDP is 1.5% while it increases to an average of 2.7% for the last ten years (2009-2018) when tax revenue to GDP ratio increases from 10.6% to 22.2% in the same time period.

Even if the reform increases the CIT/GDP ratio overtime but since 2016 there is a continuous declining trend. The reduction may be due to a slowdown of corporate benefits/profits or increase in tax evasion. Corporate income tax has also contributed to increase tax revenues but to a lesser extent than PIT especially at the end of the period.

Figure 5. 12: Trend Analysis of CIT/GDP and Tax/GDP



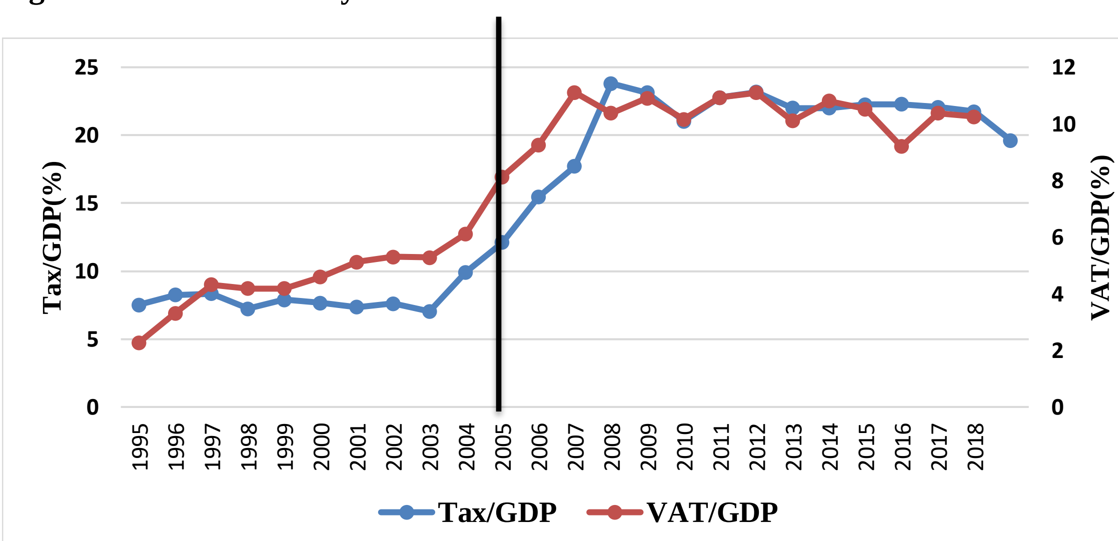
Source: UNU-WIDER and WB data bases, 2020

In Georgia the state revenue service improves taxpayer services, leading to a dramatic rise in taxpayer registration and tax compliance during 2006 to 2008. Between 2003 and 2009, tax reforms concentrated on making the tax code simple and reducing tax rates. Following this reform the government lowers the VAT rate from 20% to 18% in 2005; reduces the number of taxes and increase the number of registered taxpayers more than doubled between 2005 and 2008.

Figure 5.13 depicts that both VAT/GDP and Tax/GDP follow the same trend over time. On average VAT revenues per GDP rises from 4.8% in 1995-2005 to 10.4% for the last thirteen years (2006-2018); at the same time Tax/GDP has been increased about threefold (from 8.3% to 21.4%) due to the combined effect of the changes in the tax regulation and administration. This result indicates that tax reform on VAT plays a great role to raise tax revenue. Thus, VAT is the most effective reform measure which contributes a lot to public revenue.

This result is consistent with the finding of (Oriakhi & Ahuru, 2014); VAT, custom and excise duties provide good tax handle for the government to maximize its revenue. According to (OECD, 2015), tax reform in seven case studies has a significant increase in the tax/GDP ratio. Moreover, (Abdella & Clifford, 2010); (Oriakhi & Ahuru, 2014) (Mamo, 2017) through improving the tax system, tax reform boosts the ability of the government to generate more tax revenue.

Figure 5. 13: Trend Analysis of VAT/GDP and Tax/GDP



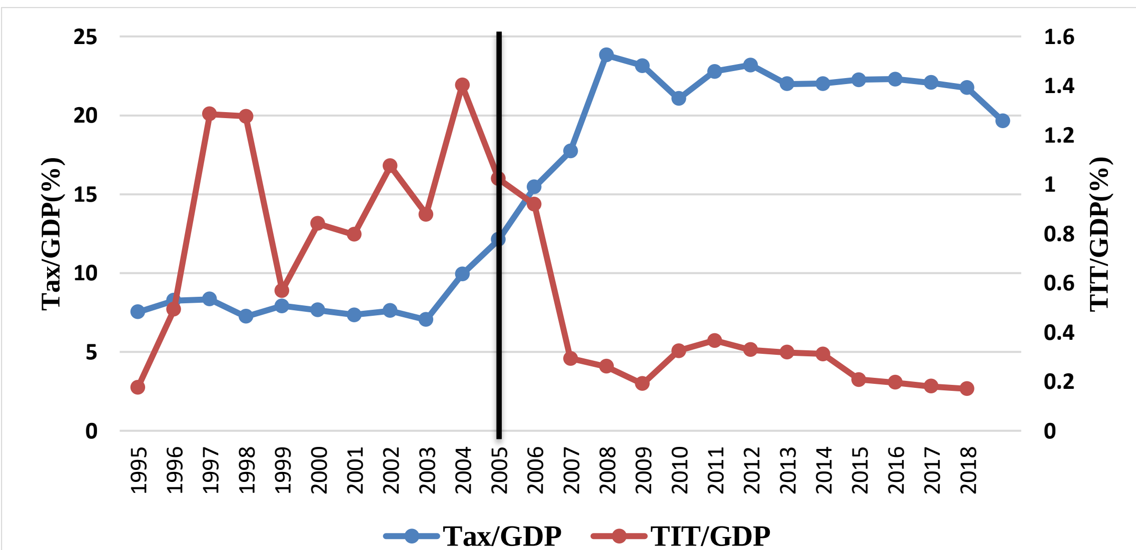
Source: UNU-WIDER and WB data bases, 2020

Most developing nations relay on international trade tax as a source of tax revenue. But now a-day tax revenues from foreign trade become decline it is mainly a consequence of world trade liberalization that eliminates trade restrictions.

As shown on figure 5.14 below, the share of tax on international trade to GDP is quite small throughout the study period and it continuously declines for the last fifteen years (2004-2018). Thus, for Georgia TIT has the smallest share to GDP and tax revenue.

On average, trade tax to GDP ratio is 0.89% before the reform (1995-2005) while it declines to 0.31% for the last thirteen years (2006-2018). This indicates that the fall in tax revenue from trade taxes negatively affects total tax revenue. But the effect is not as much since its share to GDP is very negligible and it may be off-setted by a significant positive effect of other tax components like VAT, PIT and CIT.

Figure 5. 14: Trend Analysis of TIT/GDP and Tax/GDP



Source: UNU-WIDER and WB data bases, 2020

Table 5.2 illustrated the productivity of personal income, corporate income taxes and compliance of tax on VAT for the two countries under review.

Table 5. 2: Comparisons Analysis of Tax Performance Indicators in Ethiopia and Georgia (Pre and Post reform periods)

Tax Performance Indicators	Ethiopia					Georgia				
	2002	**2013**	**2015**	**2017**	**2018**	**2002**	**2013**	**2015**	**2017**	**2018**
PIT Prod	0.03	0.06	0.1	0.1	0.9	0.38	0.44	0.41	0.55	0.58
CIT Prod	0.04	0.09	0.12	0.11	0.12	0.1	0.6	0.58	0.38	0.34
VATGCR	0.12	0.14	0.16	0.18	0.20	0.48	0.8	0.76	0.74	0.71

Source: Own computation from World Bank, NBE and UN-WIDER data bases, 2020

VAT Gross Compliance Ratio (VATGCR): It is a measurement of the evolution of the tax base or of the efficiency of tax collection on VAT. It is calculated by dividing VAT revenue by total household consumption and then dividing it by the VAT rate. Increases in the VAT GCR indicate widening of tax base (OECD, 2015).

In table 5.2 above the VATGCR ratio increases after the reform period as compared to the pre reform period. It increases from 0.12 in 2002 to 0.2 in 2018 for Ethiopia while for Georgia it increases from 0.48 to 0.71. It is clearly shown that VAT has a good performance in producing tax revenue in Georgia than Ethiopia (i.e VAT is more effective to improve tax revenue in Georgia)

PIT Productivity (PIT Prod): It measures the efficiency of personal income tax collection to improve tax revenue. It is computed by dividing the PIT/ GDP by the averages of the highest and lowest tax brackets. The rise in this value represents broadening the tax base (OECD, 2015)

As shown in table 5.2 above, productivity of PIT increases over time for both case studies. Before the reform periods, PIT productivity is 0.03 for Ethiopia and it increases to 0.9 in 2018 while for Georgia in the same time periods it increases from 0.38 to 0.58. But at the end of the periods (2017-2018), PIT productivity is higher (0.1 to 0.9) in Ethiopia which shows that there is still room for improvement in Georgia but maybe less in Ethiopia.

CIT Productivity (CIT Prod): indicates how the corporate income tax performs well to generate tax revenue with given prevailing tax rate structure. It is computed by dividing the total

CIT/ GDP ratio by the CIT rate. Increases in this indicator represent base widening (OECD, 2015)

CIT productivity shows an improvement from the pre reform to the post reform period for both Ethiopia and Georgia. Before the reform CIT Prod for Ethiopia is 0.04 while that of Georgia is 0.1. While in the post reform periods, it increases to 0.12 for Ethiopia while for Georgia it reaches to 0.34 in 2018). However, CIT prod in post reform period continuously decline for Georgia.

5.3. Tax Reforms Effectiveness on Income Redistribution (Income Inequality)

In this section the effectiveness of each tax reform measures on income distribution on the basis of income inequality is discussed.

5.3.1. Tax Reforms Effectiveness on Income Inequality in Ethiopia

Income redistribution represents the relocation of income from the rich people to the poor.

Table 5. 3: Ethiopia: Trend Analysis of Various Tax Reform Measures (% of GDP) and Gini Index

Year	Gini index	PIT/GDP	BIT/GDP	VAT/GDP	TIT/GDP
1995	44.6	0.48	1.32	0.62	2.73
1999	30	0.54	1.18	0.61	2.47
2004	29.8	0.69	1.07	0.84	3.81
2010	33.2	1.02	1.71	1.08	4.07
2015	35	2.51	3.64	5.58	2.72

Source: Own computation from NBE and WB data bases, 2020

Table 5.3 above illustrated that for Ethiopia, the highest Gini index (44.6) (showing the highest rate of inequality) is registered in 1995. But it becomes continuously declining to 30 and further to 29.8 in 1999 and 2004 respectively. However, in post 2004 the gap between rich and poor has widened over time as shown in the evolution of the Gini index which increases from 29.8 to 33.2 in 2010 and further increases to 35 in 2015. As PIT/GDP increase (from 0.48 to 0.54 and further increases to 0.69) from 1995-2004, while the Gini coefficient declines from 44.6 to 30 and further decreases to 29.8 in the same time period.

Table 5. 4: Pairwise Correlation Coefficient of Tax Reform Measures and Gini Index

	Gini index	PIT/GDP	BIT/GDP	VAT/GDP	TIT/GDP
Gini index	**1.000**				
PIT/GDP	**-0.0479**	1.000			
BIT/GDP	**0.0929**	0.9847	1.000		
VAT/GDP	**0.0138**	0.9866	0.9836	1.000	
TIT/GDP	**-0.3254**	-0.1193	-0.2337	-0.2567	1.000

In addition, on table 5.4 the pairwise correlation matrix shows there is a negative relationship between Gini index and PIT/GDP (-0.047). So we can say that as PIT/GDP increases income inequality decreases and vice versa at citrus paribus condition holds. It can be explained by the progressivity of the personal income tax rate. When PIT is progressive it benefits low income groups since they pay less amount of tax than the rich which may induces transfer of income from the rich to the poor and may induce less income inequality. While since their correlation coefficient is too small (-0.047), the rise in personal income tax might not have been powerful enough to reduce income inequality (weak correlation between PIT and income inequality). This result is consistent with the finding of (Gustafsso & Schwarz, 1991); tax reform has not much negative effect on income distribution.

On the other hand, when we see the trend of business income tax revenue per GDP and Gini index, as BIT/GDP decreases from the year 1995 to 2004, Gini coefficients also decreases while as BIT/GDP ratio increases from the year 2004-2015 Gini indexes also increase.

From table 5.4, the correlation coefficient also indicates the positive link between BIT/GDP and Gini index (0.0929). This implies that as business income tax increases income inequality also increases and vice versa other things being remain constant. This may be because higher BIT reflects more high benefits and thus higher income evolving more rapidly than lower incomes. This may induce income inequality. The reverse is true when profits are reduced. But this correlation coefficient is quite small implies that there is no strong positive relationship between BIT/GDP ratio and income inequality.

When we see the trend of VAT/GDP and income inequality, table 5.3 shows that overtime as tax revenue from VAT increases, Gini coefficient also increases and the reverse is true for a fall in VAT/GDP.

On table 5.4, the correlation coefficient between VAT/GDP ratio and Gini index is positive (0.0138). This means that as VAT/GDP increase income inequality also increase and vice versa other things being constant. Indirect taxes such as VAT are not directly related to incomes. Their effects on income redistribution may be mainly through 1) relative tax pressure that is higher for low incomes and 2) transfers. It reflects more a poor policy of transfer distribution to the more vulnerable population. Low income tax payers have to spend majority of their income on necessary goods leading to a high tax pressure than for rich individuals. This would be true if the Gini was based on savings (after consumption) but in this case it is based on net incomes (after taxation and transfers). Therefore, the level and type of consumption do not affect income inequality which can be explained by the weak correlation coefficient (0.0138) between VAT/GDP and income inequality.

The Ethiopia government collects large amount of tax revenue from foreign trade even if it reduces TIT due to reduction of trade restrictions. Table 5.3 depicts that TIT/GDP ratio declines first as Gini index falls from 44.6 to 30 but finally from 2010 to 2015 as TIT/GDP ratio declines Gini index increase from 33.2 to 35.

Moreover, the pairwise correlation shows their negative relationship (-0.3254). This shows that as TIT/GDP declines, income inequality (given by Gini index) increases and the reverse is true for a rise in TIT/GDP at citrus paribus condition. However, since the correlation coefficient is large; there is a strong negative relationship between TIT/GDP and income inequality. This may be because for indirect taxes, their reduction will mainly favor low income tax payers. So that a reduction of taxes should normally leads to reduced income inequality. On the contrary in this case for Ethiopia, it could reduce the level of public resources for distributing transfers to poor people and induce income inequality. In addition, decline in import duties may have very limited effect on the lowest 40% income in Ethiopia which may be because of no access to imported goods and poor people can't benefited from a reduction of import duties.

5.3.2. Tax Reforms Effectiveness on Income Inequality in Georgia

In this sub section, the effect of various tax reform measurements on income inequality using Gini coefficient for Georgia is presented.

Table 5. 5: Georgia: Trend Analysis of different Tax Reform Measures (% of GDP) and Gini Index

Year	Gini index	PIT/GDP	CIT/GDP	VAT/GDP	TIT/GDP
1996-2000	39.9	1.4	0.95	3.7	0.8
2001-2005	37.4	1.98	1.2	5.3	0.99
2006-2010	38.2	4.1	2.6	9.95	0.54
2011-2015	38.3	6.3	2.9	10.6	0.33
2016-2019	36.7	7.1	2.4	10.1	0.2

Source: Own computation from UNDP and UNU-WIDER data bases, 2020

Table 5. 6: Summary of Pairwise Correlation of Tax Reform Measures and Gini Index

	Gini index	PIT/GDP	CIT/GDP	VAT/GDP	TIT/GDP
Gini index	**1.000**				
PIT/GDP	**-0.3291**	1.000			
CIT/GDP	**-0.1578**	0.7802	1.000		
VAT/GDP	**-0.2982**	0.8712	0.9092	1.000	
TIT/GDP	**0.2049**	-0.6877	-0.6200	-0.5762	1.000

Table 5.5 depicts that on average tax revenue on personal income increases overtime while Gini index declines from 1996-2005 and from 2015-2019 but it increases from 2005-2015.Or the trend of Gini index seems like declining with some fluctuations. But for the last ten years (2010-2019) as PIT/GDP continuously increases Gini index becomes decline.

The correlation coefficient in table 5.6 is negative (-0.3291) indicates that there is an inverse relationship between them. So we can conclude that as PIT increases income inequality declines and vice versa at citrus paribus condition in recent periods. This may be because of the progressivity of PIT rate as shown for Ethiopia which benefits the poor tax payers to pay less amount of tax which may lower income differences. As compared to Ethiopia, the correlation between PIT/GDP ratio and income inequality in Georgia is strong because the correlation coefficient is higher for Georgia than Ethiopia.

Table 5.5 also depicts that CIT/GDP ratio increases overtime up to 2016 while the trend of Gini index seems like continuously declines in post 2010.

In addition, from table 5.6 above, the pairwise correlation matrix (-0.1578) explains the negative relationship between tax revenue on corporate income and Gini index. It illustrates that other things being constant; a rise in CIT/GDP ratio induces a reduction in income inequality and vice versa. This may be because one of the main targets of the reform is to make the tax systems progressive and conduct favorable environment for small business firms through reducing the CIT rate which decreases the tax burden of small business enterprises. Thus, a decline in CIT rate leads the small business firms to pay less tax.

Value added tax (VAT) is the main source of indirect tax revenue. The Georgian government put much effort on VAT reform; reduces its rate from 20% to 18%. Table 5.5 clearly shows on average there is a continuous increase in VAT/GDP especially in post 2010 while the trend of Gini coefficient declines since 2010.

From table 5.6 above, the pairwise correlation coefficient shows a negative correlation (-0.2982) between VAT/GDP and Gini index unlike for Ethiopia. As VAT to GDP ratio increases, income inequality reduces and the reverse is true for a fall in VAT/GDP. This may be because one of target of VAT reform is to increase the number of registered tax payers and broaden the tax base through the reduction of the VAT rate which reduces the tax burden of the poor individuals and may induces less income inequality.

Recently, the Georgian government reduces taxes from foreign trade to encourage domestic firms. The fall in TIT results a decline in tax revenue. As table 5.5 demonstrates TIT/GDP continuously declines overtime especially after 2005 (post reform periods) and similarly Gini index also decreases.

In addition, unlike that of Ethiopia again, the pairwise correlation coefficient from table 5.6 also indicates a positive (0.2049) relationship between the two. Thus, both Gini index and the share of TIT to GDP have the same trend overtime. In Georgia, income inequality has been reduced while TIT/GDP has decreased in the meantime. Due to 1) the reduction effect of import duties on tax payment of low income tax payers 2) income equality may have benefited from additional transfers to low income tax payers due to additional revenues gained from VAT, PIT and BIT.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

Domestic Resource Mobilization (DRM) is a key element for growth and development. Now -a - days it receives increasing attention from advanced country governments and donors like IMF, World Bank, WTO and EU. It increases the capacity of governments to achieve their long-term objectives through improving fiscal sustainability. The main sources of DRM are tax and non-tax revenues that aims at providing public goods and services. It has two major dimensions: fiscal policy and collection dimensions. Fiscal policy has three main objectives; these are resource effect, income redistribution effect and allocative effect.

Taxation is the major tool for domestic resource mobilization. It is a compulsory payment collected by the government from individuals without any return. In developing countries tax is the main source of government revenue. Developing nations use taxation to raise their domestic revenue, to bring sustainable economic growth and for the reduction of income inequality.

Although DRM plays a major role for governments to achieve their long-run goals, developing countries face difficulties in domestic revenue mobilization from their taxes and focusing on foreign resources like grant and aid. This is because of low tax revenue collection resulted from weak administrative capacity, difficult to tax in the informal sector, fragile tax administrations, deprived governance, low taxpayer morale and compliance and corruption. Due to these reasons the share of tax revenue to GDP remains very small for several decades in the two selected case studies, Ethiopia and Georgia. For instance tax revenue per GDP ratios was only 7.1% in 2003 for Georgia and while for that of Ethiopia it was only 7.5% of GDP.

So to improve the capacity of tax collection, Ethiopia and Georgia made tax reforms on various issues such as on tax system, tax rates and on tax administration. The main objective of this study is to examine the effectiveness of the major tax reform measures (like personal income tax, corporates and business income taxes, VAT and taxes on international trade) on tax revenue and income redistribution. The paper uses a secondary time series data ranging from 1995-2019 through applying the descriptive method of data analysis.

The result of the descriptive analysis indicates that the share of tax revenue to GDP increase sharply overtime for Georgia especially after the tax reform periods. Tax reforms led to a significant role to boost tax revenue in Georgia (three fold than the pre reform periods) while for Ethiopia the tax reform doesn't bring a significant change in tax/GDP share (tax /GDP ratio increases only from 8.2% (pre reform) to 8.5% (post reform) period). Both for Ethiopia and Georgia tax revenues cover the lion share of total government revenues. And the share of tax revenue to total revenue increases overtime for both case studies. The share of indirect taxes to GDP outweighs the share of direct taxes for Ethiopia as well as for Georgia.

Tax revenues from personal incomes to GDP ratio increases overtime for both nations but after the reform period there is a more significant change in the share of PIT/GDP for Georgia than Ethiopia. The reform of PIT was more effective to increase tax revenue in Georgia than Ethiopia. Similarly the share of corporate income tax to GDP has a greater effect on tax revenue for Georgia than the effect of business income tax for Ethiopia. Moreover, VAT is the most effective tax reform in Georgia; it brings a large increase in tax revenue while for Ethiopia VAT is introduced to replace the general sales tax which is ineffective to boost tax revenue, but VAT has a negligible effect on total tax revenue because of tax evasion, corruption, weak administration system and lack of knowledge about VAT. On the contrary of PIT, CIT and VAT, because of the trade liberalization by WTO which restricts trade barriers, tax on foreign trade declines overtime and has a negative effect on tax revenue. Ethiopia is more hit by this decline as it previously relied more on international trade tax than Georgia.

The influence of tax reforms on income inequality seems overall positive. The analysis suggests that the rise in personal income tax has been accompanied by a reduction of income inequality both in Ethiopia and Georgia but its effect for Ethiopia is negligible. Income inequality and corporate income taxes have negative relationship for Georgia while business income tax to GDP ratio has a positive relation with income inequality in Ethiopia. Like that of PIT/GDP, BIT/GDP also has a small but positive effect on income redistribution (has no much positive effect on income of the poorest 40% of the population). This means that, additional BIT does not seem to provide room for increasing transfers to low income tax payers for Ethiopia. An increase in VAT/GDP reduces income inequality for Georgia while it a little bit aggravates income inequality for Ethiopia.

Lastly tax on international trade has a different effect on income inequality for Ethiopia and Georgia. It has the largest share to GDP for Ethiopia while for Georgia it covers the smallest share to GDP which may indicates that the link between TIT and income redistribution is very weak for Georgia. For indirect taxes such as TIT their reduction will mainly favor low income tax payers. As a result, a reduction of trade taxes should normally lead to reduce income inequality. On the contrary it could reduce the level of public resources for distributing transfers to poor people. But this effect should be very limited in view of the evolution of public revenues as a whole especially in Georgia. It may be less the case in Ethiopia, where also the lowest 40% income have may be no access to imported goods and can't benefited from a reduction of import duties.

6.2. Recommendations

Based on the findings of this study the following policy implications are drawn as an alternative to improve the performance of the tax collection and tax reforms, for the development of the economy.

- Given the grass root share of total tax revenue to GDP for Ethiopia, the government should revise the tax reforms since until now they have shown a lack of effectiveness. Reforms should be targeted on the administration of tax.
- The negligible effectiveness of personal income tax (PIT/GDP) on gross tax revenue and income inequality for Ethiopia may be partly explained by a slow increase of labor income in the country reflecting a lack of opportunity for more qualified jobs. Ethiopia should support an increase in literacy and reduction in unemployment rate through creating employment opportunities for the educated individuals to boost tax revenue from personal income tax.
- In Ethiopia the rate of VAT is constant, which is 15% for all consumption goods. It unduly affects the majority of urban poor unless attentive policy, legal and administrative measures are taken, it could be an impediment to the realization of equity that the constitution and other laws intend to meet. It is resulted from administrative, legislative and awareness limitations. Hence, there is a need of amendment on the VAT proclamation that would go some way to make the tax system fairer.

- Differentiate VAT rates could be introduced between luxurious goods and necessity goods. This allows exempting more goods which are commonly consumed by the low income groups and introduce a higher rate of VAT for high cost and luxury goods that only the rich individuals can afford. Those who can pay should do it and the revenue can serve to redistribute income as well.
- Registering taxpayers is essential to increase tax revenues. But in Ethiopia taxpayer registers till now are in poor shape, with many people outside the system. There is shortage of advanced machines that are used to control the number of tax payers who are registered. So the tax authority should increase tax payer roll to boost domestic tax revenue using modern registration machines.
- In order to increase tax revenue, the tax administration should be improved with reducing tax avoidance and tax evasion. And to make the tax reform more effective a strong administrations and cooperation's of the tax payers with taxing authority and the government is required. .
- Moreover, rampant corruption is a big challenge in tax collection system. Reducing corruption supports the government to increase tax revenue. It is also advantageous to the taxpayer who is less exposed to corrupt actions by officials and unfair competition which is created by those willing to pay. To do so any concerned body should strictly fight against corruption and there should be a strict law that punishes the individual who made this guilty action. And Ethiopia should learn from Georgia on the actions that Georgia took to fight against corruption.
- International trade tax is one source of tax revenue for developing countries. However, recently since developing countries reduce foreign trade taxes through reducing import duties; it impedes the growth of tax revenue, leads a country to rely on foreign commodities and discourage domestic producers. Therefore, rather than reducing duties on all imported goods, duties reduction should be on commonly consumption goods that everyone can afford and impose large duties for luxury goods that only the rich people can afford.

Bibliography

Abdella, A., & Clifford, J. (2010). The Impact of Tax Reform on Private Sector Development in Ethiopia

Akanbi, O. A. (2019). State Institutions and Tax Capacity: An Empirical Investigation of Causality: IMF Working Paper; Fiscal Affairs Department.

Belay, A. A. (2014). System of Division of Revenue In Ethiopia. *European Scientific Journal September 2014 /Special/ edition Vol.2 ISSN: 1857 – 7881 (Print) e - ISSN 1857- 7431.*

Bogale, Y. M. (2013). History of Taxation in Ethiopia .

Buettner, T. (2006). VAT Introduction and WTO Membership: The Experience in Developing and Transition Countries.

Byiers, B., & Dalleau, M. (2011). Fiscal challenges,development opportunities? *European Centre for Development Policy Management; Discussion paper*.

Daba, D. (2014). Tax Reforms and Tax Revenues Performance in Ethiopia. *Journal of Economics and Sustainable Development*, pp.11-19.

Daniel, G. (2012). The Effect of Tax Reforms and Economic Factors on Tax Revenues in Kenya

Demirew, G. (2005). Tax Reform in Ethiopia & Progress to Date. Addis Ababa: Ethiopian Economics Association, International Conference on Ethiopian Economy.

Diamond, J. (2008). Fundamental Tax Reform Issues, Choices, and Implications, The MIT Press .

Dos Santos, P. (2002). VAT Introduction – Administrative Issues paper prepared for Caribbean Regional Technical Assistance Centre.

Ebrill, L., Keen, M., Bodin, J. P., & Summers, V. (2001). The Modern VAT (Washington:International Monetary Fund.

Engler, M. (2011). Redistribution in Switzerland: Social Cohesion or Simple Smoothing of Lifetime Incomes? *Swiss Journal of Economics and Statistics*, pp. 107-155.

Farys, O. H. (2015). The Suitability of Tax Data to Study Trends in Inequality:A Theoretical and Empirical Review with Tax Data from Switzerland.

Farys, O. H. (2018). Income Redistribution Through Taxation – How Deductions Undermine the Effect of Taxes.

Filer, K. T. (2012). Tax Reform in Georgia and the Size of the Shadow Economy. *Discussion Paper No. 6912*.

Fossat, P., & Bua, M. (2013). Tax Administration Reform in the Francophone Countries of Sub-Saharan Africa. *IMF Working Paper No. 13/173* .

Gashaw, D. (2005). Tax Reform in Ethiopia & Progress to Date. Addis Ababa: Ethiopian Economics Association, International Conference on Ethiopian Economy June.

Gashaw, M. (2015). Tax Reform Discourse and Its Implication on Development:Evidence from the VAT Introduction in Ethiopia. *Mekelle University Law Journal*.

Geda, & Shimeles. (2005). Taxes and Tax Reform in Ethiopia, 1990-2003

Gustafsson, B., & Schwarz, B. (1991). Income Redistribution Effects of Tax Reform in Sweden . *Journal of policy modeling*, 551-570.

Hailemariam, M. (2011). Implementation of VAT and its Related Problems in Ethiopia: The Case of ERCA, MSc. Thesis, Addis Ababa University School of Business and Public Administration.

Humbelin, & Farys. (2016). The Suitability of Tax Data to Study Trends in Inequality. A Theoretical and Empirical Review with Tax Data from Switzerland. University of Bern Social Sciences Working Paper No. 16

IMF. (2005). Tax code of Republic of Taxastan.

IMF (2016). Enhancing the Effectiveness of External Support in Building Tax Capacity in Developing Countries.

Immervoll, H., & Richardson, L. (2011). Redistribution Policy and Inequality Reduction in OECD Countries:What Has Changed in Two Decades?

Islam, A. (2001). Issues in Tax Reforms. *Asia-Pacific Development Journal*.

Jalata, D. (2014). The Role of Value Added Tax on Economic Growth of Ethiopia. *Journal of Science, Technology and Arts Research; 3(1):156.*

Jandieri, G. (2019). Tax Reforms in Georgia.

Jemal & Mesfin. (2007). Public Finance Teaching Module Part I.

Karine, & Randall. (2012). Tax Reform in Georgia and the Size of the Shadow Economy

Kenworthy, L., & Pontusson, J. (2005). Rising Inequality and the Politics of Redistribution in Affluent countries. *LIS Working Paper Series, No. 400*.

Kirabo J., K. S. (2013). Institutional capacity and local revenue generation in Nakasongola town council.

Kryeziu, A. (2012). Development of Importance and Objectives of Fiscal Politics in Republic of Kosovo and Recommendations. *International Journal of Literature, Linguistics & Interdisciplinary Studies*.

Leos Vítek, K. P. (2006). Evaluation of the Effectiveness of the Tax Collection - The Case of the Czech Central And Local Governments.

Mamo, S. (2017). The impact of Tax Reform on the Revenue Productivity of the Ethiopian Tax System.

Mascagn, G. (2014). Tax Revenue Mobilisation in Ethiopia; Desertation Doctor of Philosophy.

McCutchen, K. (2016). Analyzing Georgia's Tax Reform Proposal.

MoR. (2003). A Glimpse at Government Tax Administration and the Tax Reform Program.

Muñoz, S., & Cho, S. S.-W. (2003). Social Impact of a Tax Reform: The Case of Ethiopia. *IMF Working Paper*.

Muriithi, M. K., & Moyi, E. D. (2003). Tax reforms and revenuemobilization in Kenya: AERC Research Paper 131.

Musgrave, R. (1998). Tax reform in developing countries. In David Newbery and Nicholas Stern (eds.). The theory of taxation for developing countries. New York/Oxford:. 242-263.

Narmania, D., & Khokrishvili, E. (2009). Tax Reform in Georgia - Which alternatives should be used?

NBE. (2020). National Bank of Ethiopia Annual Report.

OECD. (2006). Fundamental Reform of Personal Income Tax, OECD publishing, No.13. 31.

OECD. (2008). Growing Unequal?: Income Distribution and Poverty in OECD Countries.

OECD. (2011). Divided We Stand: Why Inequality Keeps Rising.

OECD. (2015). *Examples of Successful DRM Reforms and the Role of International Co-operation.* Discussion Paper.

Oriakhi, D. .., & Ahuru, R. R. (2014). The Impact of Tax Reform on Federal Revenue Generation in Nigeria. *Journal of Policy and Development Studies Vol. 9, No. 1* , 92-108.

Paulus, F. F. (2012). The impact of indirect taxes and imputed rent on inequality: a comparison with cash transfers and direct taxes in five EU countries .

Peter, K. S., Buttrick, S., & Duncan, D. (2008). Global Reform of Personal Income Taxation, 1981-2005: Evidence from 189 Countries.

Piketty, T. (2014). Capital in the Twenty-First Century. Cambridge: Harvard University Press.

Rao, M. G. (2000). Tax Reform in India: Achievements and Challenges. *Asia-Pacific Development Journal*, 59-73.

Stewart, M. (2003). Global Trajectories of Tax Reform: The Discourse of Tax Reform in Developing and Transition Countries. *Harvard International Law Journal, Vol 44, No.1*, 142.

Tadesse, L. (2010). The Ethiopian Tax System: Excesses and gaps .

Teshome, A. (2008). How the financial crisis of 2008 affects Ethiopia?

Timothy, L. (2007). Law Reform in Developing and Transitional States, Taylor and Francis. 359.

Tsegaye. (2011). Professor Mesfin Woldemariam Interpretation of Ethiopian History: Standing on a Slippery Slope Critics. Available aigaforum.com/articles/Interpretation_of_Ethiopian_History.

UNCTAD (2005). Trade and Development Report. New York and Geneva: United Nations.

UNDP (2016). Performance and Prospects of Tax Collection in Ethiopia

USAID (2016). Domestic Resource Mobilization. Case Study of Rwanda, 1990-2016

Wang, C., Goudswaard, K., & Caminada, K. (2012). Disentangling Income Inequality and the Redistributive Effect of Taxes and Transfers in 20 LIS Countries Over Time.

WB. (2017). Objectives of Taxation

WB. (2020). World Bank annual report data base.

Williamson, J. (2003). A Short History of the Washington Consensus, and Suggestions for What to Do Next; Reform Agenda.